

Life Sci.

MARCH 2001

NO. 317



The American Peony Society Bulletin



Grand Champion, Milwaukee, WI

Lemon Chiffon (David Reath 1981, Vulcan, MI)

Lemon yellow hybrid with bloom of bomb to ball type double, strong stems, 32 inches holding bloom erect. photo—Roy Klehm

Announcing

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

**AMERICAN
TREE
PEONIES**



Appended cultural notes cover:

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

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

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-pollinated *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.

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

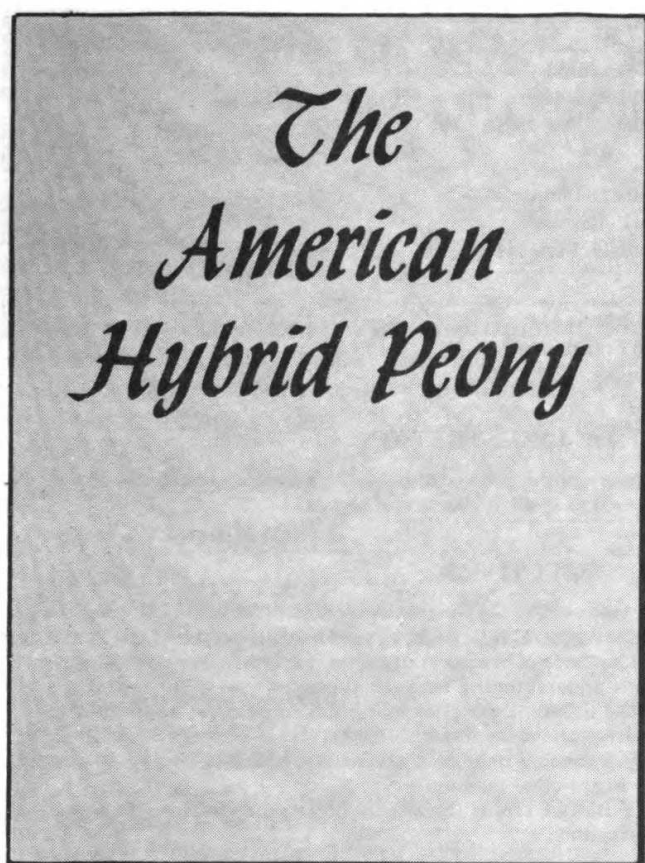
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*Devised and
Compiled by
Greta M. Kessenich,
Don Hollingsworth
Hybridizing and
Bibliography*

Ever since contemporary hybridizers unraveled the mysteries of cross pollinating peony species, hybrid crosses have received spellbound attention. This long-awaited effort adds to the excitement of growing peonies. Photos permit comparing your hybrids with those authenticated by the hybrid committee plus scores of sideline notes and general information. Be one of the first **\$25.00** to own this premiere edition, just Postpaid

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DEPT. OF REGISTRATION

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

Greta M. Kessenich, Secretary

OBJECTIVES

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

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

MEMBERSHIP

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

Single Annual	\$7.50	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 householdOne 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 2001 — No. 317

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

Presidents Message

This is the time of year when we can take the time to update our garden plans and to look back and check our wish lists to see what we missed in our fall planting. If the nursery was sold out of that special plant you wanted (such as my order for Lemon Chiffon), get your order in earlier this year. This is a good time to check the catalogs and decide what new varieties you want to see where they are available. If you are able to attend the American Peony Society show in Hamilton, Ontario, Canada, this June, you will see many of the best flowers, and you can talk to the growers to see what they have available.

You might think about bringing some flowers to the APS show this year. If you are new to exhibiting peonies, or if you need to brush up on your exhibiting skills, there are past articles in the *American Peony Society Bulletin* that explain the correct way to store and display your blooms. While on the subject of the bulletin, the December 2000 issue is also an excellent reference for the Gold Medal peonies back to 1923 and Grand Champion peonies from 1947 to 2000. In addition it contains some fine historical articles on the peony.

Start making your travel plans for the annual convention and exhibition to be held in Hamilton, Ontario, Canada, on June 8, 9, and 10, 2001. Thanks to Greta Kessenich and John Simkins for coordinating the arrangements for this show at the Royal Botanical Gardens. I look forward to seeing you and your flowers there.

Floyd E. Kimball



ANNUAL CONVENTION AND EXHIBITION 2002

Olbrich Botanical Gardens, Madison, Wisconsin

June 8-9

—Roger Anderson and Roy Klehm



To Reach the Royal Botanical Gardens

Visitors coming via Niagara Falls or Fort Erie reach this area, on the Queen Elizabeth Way by passing Hamilton over the Burlington Skyway Bridge following the signs to Hwy 403 to Hamilton. At Hwy 6 exit right and proceed north to the first signal lights. Go right and follow the road down the hill to the next signal light. Turn left on Plains Road and proceed East to the rear of the large R.B.G. headquarters building on the right. Pass the first parking lot at the rear and if entering flowers in the show enter the next (exhibitors) entrance and unload your peonies. Then drive to the main parking lot at the next corner.

Coming from the Windsor or Sarnia border proceed on Hwy 401 to Woodstock and exit on 403 to Hamilton and continue past the Cathedral on the right and the water and marsh on the left of the Hwy 6 exit on the left. At the first signal light go right and follow the previous directions above to the R.B.G.



CONVENTION & EXHIBITION JUNE 8, 9, 10, 2001

American Peony Society and the
Canadian Peony Society (Ontario Region)

Royal Botanical Gardens, Hamilton, Ontario, Canada

SCHEDULE OF EVENTS

FRIDAY, June 8

2:00-9:00 p.m. — Prepare Show Entries. Preparation areas are behind the show rooms. Enter through the Exhibitors and service entrance to the building at the rear of the RBG HQ.

3:00 p.m. — Registration opens in preparation area.

SATURDAY, June 9

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

8:00 a.m. — Registration in lobby.

11:30 a.m. — Judging begins.

Lunch on your own. There are restaurants in
HQ, Rock Garden, and Hendrie Rose Garden.

1:30-9:00 p.m. — Show open to the Public.

2:00 p.m. — Seminar discussion on where do we go from the cactus dahlia style peonies? Is variegated foliage, repeat blooming and cloning far away? Visitors welcome.

During the afternoon we will have group visits to the 250 Chinese Tree Peonies in the holding area if they are in bloom.

7:30 p.m. — Annual Banquet Royal Connaught H. J. Plaza Hotel Hamilton.

9:30 p.m. — Root auction.

SUNDAY, June 10

8:00 a.m. — Board of Directors Meeting RBG HQ.

9:00-6:00 p.m. — Show open to the Public.

Hotels and Inns

Please make reservations directly to the accommodation of your choice.

The Royal Connaught Howard Johnson Plaza Hotel—112 King St. East, Hamilton, Ontario L8N 1A8. A block of 15 rooms have been reserved. These will be held until 30 days before the event and then returned to inventory. The APS rate quoted is \$89.00 Cdn. for the room. The Banquet will be in the Acadian Room. Phone 1-905-546-8111 or FAX 1-905-546-8118. You may get a lower rate and save long distance charges by phoning the H.J. central reservation 1-800-446-4656 and ask for the special rate. There is parking beside the hotel at about \$5/6 per night.

The Admiral Inn—This inn has been recommended by some members in past years and has been recently refurbished. It is at

149 Dundurn St. N. at the corner of York St. just across the road from Dundurn Castle. Phone 1-905-529-2311. It is about halfway from the R.B.G. to the H.J. Plaza Hotel. Their rate is \$89.95 Cdn. and they have a restaurant and free parking. We will send a local map to each person as their registration is received.



Registrations

The registration for the banquet and the Gardens is #31.00 Cdn. The banquet is \$26.00 including service charges and taxes and is in the H.J. Plaza Hotel. The \$5.00 registration badge will allow entrance to all the gardens for the weekend, a \$20.00 value. The Laking Gardens is the site for the approximately 700 plant herbaceous peony collection and a 300 Japanese and Lutea hybrid tree peony entrance garden. There are several demonstration perennial gardens and several large groups (close to a 1000) bearded iris. Since 1997 we have added 200 Chinese Tree and 50 herbaceous peonies from Louyang. These are in a holding and evaluation area for three years. If they are in flower we hope to take interested parties to see them as this area is not in the public domain.

We have contracted for 40 meals for the banquet and need to have a count by May 15th to firm up the arrangements. Registrants will receive a package on arrival containing a gardens entrance badge, tickets for the banquet and a brochure map of the Gardens. There is a free bus for transportation between the garden areas but each has parking facilities if you prefer to drive.

Canadian currency is preferred but will accept U.S. at \$1.50 CDN per \$ U.S.. Sorry we have no facilities for credit cards.

Send registrations to APS c/o John Simkins, 1246 Donlea Cres., Oakville, Ontario, L6J 1V7, Canada. Inquiries, Phone 1-905-845-8380, FAX 1-905-845-4163, E-Mail: jsimkins@tap.net

A GST tax of 8% charged on most expenditures in Canada will be refunded on Hotel costs and any parcels being taken back to the U.S.A. The forms needed are at the Canadian Customs and Emigration offices at the border, and at some tax free border stores. Ask for the "GST Forms for Foreign Visitors." There is no permit or customs duty for bringing cut flowers to Canada for non-commercial use.



The Auction

This year the auction could be a joint effort of the APS and the CPS. Proceeds from donations by APS members would go to the APS and from CPS members to the CPS. Joint members may note on the card who is to get the proceeds. Cross border sales have become costly to the donors as they have to pay for the phyto certificate inspection. This may be alleviated by having the shipments handled by a Canadian and a United States nursery who can ship them across the border in bulk on one Phyto each. This, I understand has been agreed to by the Board. Canadian roots for shipment to purchasers in the U.S. would be sent to Frankford nursery who would have them inspected and shipped in bulk to a designated address in the U.S.

who would ship the individually addressed parcels to the buyer. The U.S. nursery would receive parcels from U.S. donors sold to Canadians, have them inspected and ship them in bulk to Frankford nurseries who will ship them to the buyers.

Ken Clare has offered to handle the Canadian side.

Dr. Kent Crossley, New Peony Farm Nursery will assist in the handling of the shipments of the American Peony Society.



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

LACTIFLORA. One Bloom,

Class

130	Double white	138	Bomb white or blush
131	Double blush	139	Bomb pink
132	Double light pink	140	Bomb red
133	Double dark pink	141	Japanese white or blush
134	Double red	142	Japanese pink
135	Semi-double white or blush	143	Japanese red
136	Semi-double pink	144	Single white or blush
137	Semi-double red	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
151	Double or semi-double coral	156	Single yellow
152	Double or semi-double pink	157	Single coral
153	Double or semi-double red	158	Single pink
154	Japanese, any color	159	Single red

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 HYBRID. One bloom.

Class

- | | |
|-----|------------------------------------|
| 172 | Yellow, any form |
| 173 | Any color except yellow, any form. |

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 |
| 175 | Pink |
| 176 | Red |
| 177 | Maroon |
| 178 | Lavender/Purple |

- | | |
|-----|-----------------|
| 179 | White, Cream |
| 180 | Yellow |
| 181 | Blend |
| 182 | Pink |
| 183 | Red |
| 184 | Black-red |
| 185 | Lavender/Purple |

TREE PEONY. One bloom.

SUFFRUTICOSA (MOUTAN)

HYBRID T.P.

Class

Class

- | | |
|-----|-----------------|
| 186 | White |
| 187 | Pink |
| 188 | Red |
| 189 | Maroon |
| 190 | Lavender/Purple |

- | | |
|-----|-----------------|
| 191 | White, Cream |
| 192 | Yellow |
| 193 | Blend |
| 194 | Pink |
| 195 | Red |
| 196 | Black-red |
| 197 | Lavender/Purple |

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

- | | |
|-----|---|
| 198 | Single, any color; also "b" and "c" if such form exist. |
|-----|---|

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

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 current-

ly 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 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

603 Double light pink

604 Double dark pink

605 Double red

606 Bomb, any color

607 Semi-double, any color

608 Japanese, any color

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.

*There is no Design Competition but demonstration peony
arrangements made by Design Demonstrators
from the Royal Botanical Gardens Auxiliary will be on show.*

*If anyone would like to make a design
we will supply the peonies and a place.*

✻ ✻ ✻

TREE AND HERBACEOUS PEONIES IN MODERN JAPAN 2ND PRINT IS SOLD OUT!

Sorry, we no longer can accept orders. We have no plans for reprints.

Japan Tree Peony Society

—Address Changed—

c/o Tadao Muraoka, Director

30-17-304 Shibayama 3 Chome

Funabashi, Chiba, Japan 274-0816

Hybridizing is Easy

by Edward Lee Michau

Making a peony cross is relatively simple and easy. Some of the writings and methods of hybridizers make it difficult, especially to those that have not made any crosses.

The simplicity of storing pollen for later use is no problem. Should you want to cross early bloomers on to later ones, then it is

necessary to store the pollen. Many dry the pollen under a lamp until the little cases crack open, spilling out the powdery grains of pollen. Many transfer the pollen to a 35 mm film can, closing the lid tightly for storage. Professor Saunders apparently stored his on watch crystals in an open dry room.

Personally, I find these procedures cumbersome and also feel that drying the pollen under a lamp may overheat and thus kill it. However, thousands of seedlings are produced in this way.

I place the pollen, stamens and all in an ordinary letter-sized envelope on which the variety and date have been written. In alphabetical order, I place the envelopes in a half gallon plastic ice cream container which has an airtight snap-on lid and which has about an inch of granular dessicant in the bottom. A few hours dries the pollen, and it is kept dry by being stored in this manner.

To make a few crosses among simultaneously blooming plants, use the pollen available and discard the excess.

In applying the pollen, each individual has their own method. Professor Saunders used a small camel hair brush. Many others, the same. E.L. Pehrson uses and advocates the fingertip. I use eyebrow tweezers. (I have about ten of them.) An adopted method of peony breeding should be one that is easy for you.



Dividing Roots / Peonies

by George Hernandez—Klehm Nursery

Any plant that is over five years old will be difficult to divide because of the density of the matted roots. Three to five-year-old plants seem to yield the greatest number of usable three-to-five eye divisions.

Before starting to cut it is best to count the number of eyes on the plant. Then after looking over the plant and counting the eyes, try to find where all major roots join the crown. Before cutting anything, you should determine how many three-to-five eye divisions can be made. This is done by looking for those portions of the plant that have three-to-five eyes and where three-to-five finger-sized roots or their equivalent are connected to the crown or to each other. As the plant is being assessed to determine where the first cut is to be made, prune off any broken or damaged roots and trim the stems back to the eyes. The stems are tough and should be cut with hand pruners.

When you are ready to make the first cut, place the plant on a stable work surface and keep it secure while you are cutting. Start all cuts by carefully inserting the point of the knife into the root and smoothly complete each cut with a single motion. Do not chop or hack at the root or it will split unevenly. Next, if the portion of the crown you are trying to divide is too thick to cut through completely, then with your knife cut around the crown where you can reach and gently pull apart the cut portions. The three-to-five eye division that you have cut is now ready to be trimmed.

The roots of the division should be trimmed to a length of six or seven inches. Peony divisions perform best when all of the smaller thread-like roots are removed. This forces the plant to produce new large secondary roots, which are formed near the ends of the remain-

ing roots. The removal of these smaller roots not only promotes new root development, but also aids in the prevention of disease. The smaller roots desiccate more readily and in their weakened condition become more susceptible to attack by fungal organisms.

A well-trimmed division will allow ample room for new roots to form and for existing roots to increase in girth without growing into one another. Any diseased portions of the root should be removed and irregular wounds should be cut smooth. Older plants with large roots often have hollow centers. These should be cleaned and examined for rot.

Hybrid peonies are difficult to divide but the same method is used. Experienced cutters will always look any plant over before making a cut. It may be necessary to trim excess roots away in order to see more clearly. Patience seems to correspond to success in the division of peony roots. The physiological requirements of a peony are the foundation of the viability of their divisions. The dividing of hybrid root requires not only patience and common sense but also practice. Expect smaller divisions when cutting hybrids, because there is less root mass than with other peonies. However, these hybrid divisions must have enough root to support the eyes that remain.

The crown of the hybrid is very distinct. The eyes develop on its upper portions, while the roots radiate from its lower portions. This unique formation is what makes dividing the hybrid difficult. Longitudinal cuts of the crown are often the only cuts that will yield divisions. A steady hand is needed to slice through the crown while avoiding any eyes that may lay in the path that the knife must follow. There are no secrets or short cuts for the successful cutting of hybrid roots. Practice is the best way to master the skill.



All roots should be cut back to four to eight inches. The best divisions of a large plant are on the outside. The best divisions have the roots joined to the crown or near the base of the eyes. Trim all divisions so the cut surfaces are smooth and clean and there are no cut pockets in the crown.

—John C. Wister

“The Peonies,” Chapter 5, Peony Culture



BLIGHTS AND CONTROL IN PEONIES

Although many people still believe that peonies are free from disease, the fact remains that these plants are susceptible to a number of troubles, some of which are of minor and others of major importance. These diseases are of various types, including blights, stem rot, wilt, root-knot, leaf-spots, and virus troubles.

BOTRYTIS BLIGHT

Of the several diseases to which peonies are susceptible, Botrytis Blight should receive first consideration as the most common and generally destructive. Various reports in the literature would indicate that the disease occurs in practically all regions in temperate North America and Europe where peonies are grown. The chief losses from Botrytis Blight are the destruction of young shoots early in the Spring and the blighting or rotting of the buds and flowers. In addition, the foliage may be blighted, thus serving to reduce the vigor

of the plants as well as to detract from their ornamental value.

Early in the Spring, the causal fungus attacks the young succulent shoots and causes them to wilt suddenly and to topple. Shoots in all stages of growth, up to and including those showing buds, are susceptible to this type of injury, which is characterized by a soft brown rot of the stem that extends above and below the surface of the soil. In rare instances, the rot may extend down into the roots. Small buds, when attacked, cease growth and turn black. A bud blast similar in appearance to that produced by Botrytis blight can result from other causes, such as Phytophthora blight, poor vigor of the plants, and too deep planting. When older buds are affected, the petals become watery and matted, turn brown, and die. In later stages, the rot may extend down the flower stem for a considerable distance. Open flowers, when attacked, turn brown, droop, and become a rotted mass of petals. Infected leaves exhibit circular or triangular lesions with zonations of dark and light brown. The lesions vary considerably in size, and in some instances may involve an entire leaflet. The fungus may grow down through an infected leaf into the stem where a typical brown canker is formed.

CONTROL

Measures for the control of Botrytis blight should begin with a thorough clean-up each Fall. As soon as the tops have died down, all stems, leaves, and other plant debris should be carefully gathered and burned. Many of the better growers go to the extent of pulling the soil away from the crowns thus to cut off the stems as close as possible to the roots. Experience has proved that sanitation of this sort will serve to destroy the overwintering pathogene and materially reduce, if not completely eliminate, infection the following season. The effective control to be gained from this practice for Botrytis blight and many other diseases of the peony cannot be emphasized too much.

The following Spring, all rotted or wilting shoots should be removed and destroyed as soon as detected. It is also advisable to remove infected leaves and buds in the same manner. If a mulch has been used for Winter protection, the covering should be removed early in the Spring to prevent damp conditions around the young shoots. Apply Bordeaux spray early in the season when the pink eye of the peony first is seen, then spray three times, ten days apart.

Certain cultural practices will also prove beneficial. Thus, when making new plantings, the clumps should be given adequate space in order to prevent the development of large dense clusters, which serve to promote conditions favorable to attacks of the fungus. For the same reason, old established plantings should be dug and divided when necessary. The use of sunny, open exposures will aid considerably in preventing serious epidemics of the Botrytis blight disease.

Field observations indicate that peony varieties vary widely with regard to relative susceptibility to the disease.

PHYTOPHTHORA BLIGHT

Like all leaf diseases of the peony that show up only after the blooming period, this disease should be controlled by frequent sprayings with Bordeaux mixture during July and August. A spraying program combined with the removal and destruction by burning of all the old Botrytis blight and leaf blotch, should prove efficacious for this disease also.



Peony Seedlings

Can we speed up the process?

by Jack Nordick
P.O. Box 24, Ortonville, Minnesota 56278

In the fall of 1999 I picked over a quart of seed from my various peonies. I tried several ways of planting them in the hope of finding one that would be clearly superior. Some of the seeds were planted in beds in the garden. Most were spread in standard greenhouse flats at the rate of one per square inch, set on two inches of good potting soil and covered with another inch of the same. The flats were watered well, covered with sheets of glass, and stacked in a corner of an almost heated garage. For the first part of the fall, the temperature in the garage was often quite warm, over 80°F. During the course of the winter the temperature hovered below freezing, but never less than 20°F. The seedlings began to emerge at the beginning of March and at that time were set out in individual pots. They were placed under artificial lights for the rest of the summer, some under fluorescent lamps and others under an HID light.

As the summer went along I began to realize that after five months of growth they would begin to go dormant and spend the next seven months resting. I wondered if there could be a way of using some of that time for another period of growth.

In mid-summer I had a chance meeting with a man who had known Br. Charles Reckamp very well. Br. Charles is widely known for his work with day lilies. I was told that it had been his first plant to do work with peonies, until he discovered that it took about 15 years from the time he made a cross until the possibility of releasing a new variety for commerce. He didn't think he would live long enough to make the effort worth while. (I'm grateful that the hybridizers like Mr. Itoh from Japan and Mr. Smirnow who passed Mr. Itoh's discoveries on to us, and the many other great peony hybridizers from the past and present didn't think that way.) Br. Charles went on to do his work with *Hemerocallis* because it only took half the time that it did with peonies. So I thought that it would be really nice to find a way to speed up the process, especially since it also seems that peonies do not take to tissue culture propagation the way many other nursery plants are cloned. After all, if I would hope to ever release for commerce any great peonies I might chance to develop, I have to take advantage of every moment that I have, since I'm not getting any younger either.

Knowing that peonies do not need all of the time of our northern winters to break dormancy (usually 600 hours below 20°F is considered sufficient) I thought of another plan. (I had already had some experience with growing peonies under artificial lights when some peony roots arrived one fall with fresh green shoots which indicated to me that they had been in cold storage for a whole year, and then they had broke dormancy immediately when taken out of storage. This is not unusual with a lot of nursery stock imported from Holland, and i see it all the time with a variety of stock sold in shopping centers. I grew those root divisions under lights for the winter, gave them cold treatment in the garage in early spring, and planted them in the garden in early summer. They all survived, but as they started in extremely weak state, I felt that they had made less growth

over the two growing seasons than a normal root division usually should be expected to do in one.)

At the end of July, fifteen of the best looking plants from the seedlings were selected and placed in a normal cool refrigerator for two weeks. After that, the temperature was lowered to about 20°F for another month.

After a second session of two weeks in a normal refrigerator they were placed back under the lights. In the meantime, the other seedlings from the group were planted in rows in a peony bed. Those plants now in the garden can serve as a control group to compare with the ones which continue to grow under lights. I did find that about 1/3 of the seedlings grown under lights had died, mostly because they were too wet, and a few others because they were too dry. Clearly the hardest part of growing the peonies in pots this way was maintaining an even water supply. (Maybe having a capillary mat under the pots would have helped.) Perhaps really rare seeds would be too valuable to treat in this manner.

Seedling plants which germinated in the garden from the previous fall's planting clearly had superior growth to those grown in the pots. But two weeks after placing the pots again in the warm room under the lights, the plants in pots began to emerge for the second season of growth while those in the garden were a month into dormancy. When the plants did not emerge the first week after removal from cold storage, I had begun to be concerned that the cold period had been insufficient to break dormancy. but in three weeks, all of the pots showed the rosy shoots that I was eagerly awaiting. The plants were started under florescent lamps, and after the first three weeks were all placed under the HID lamp. As this group is much smaller than the whole batch with which I had first started, it has been much easier to carefully check each pot every few days to make sure they are getting just the right amount of water.

In February the pots will be placed back in the garage for another cold treatment, and then at the end of May half of them will be set out in the garden and the rest left in pots. I expect to continue this process for a couple of years.

Only the future will show with certainty if forcing the peonies into two seasons of growth each year will prove to be a clear advantage in their growth and propagation.

Other options might offer improvements. If the plants in the pots were placed outside for the summer rather than under artificial lights would they grow better?

Would larger pots offer a greater chance of success? (I used two and three inch plastic pots.) The roots in the pots tended to curl, looking much like grub worms after their first season of growth. While the roots of plants grown outside were, on an average, only just slightly larger than those grown in the pots, they were all straight. They also showed stronger foliage growth. (However, the largest root of all of those that I checked was one which was grown in a pot.)

Could an entrepreneur grow plants in the Northern Hemisphere May-August and in the Southern Hemisphere November-February? Considering that prize roots in commerce are selling over \$200 each, could this be a way to speed up the propagation of rare and choice varieties?

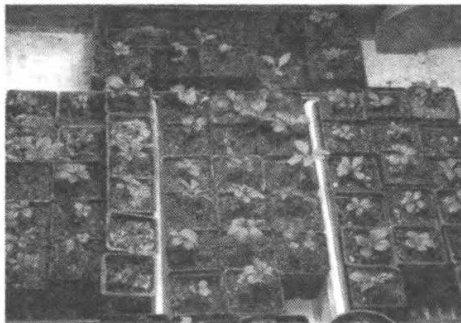
Would such a plan be economically feasible? Perhaps some major growers are already using such techniques. I know that it is done for

Amaryllis which are most commonly grown both in Holland and South Africa.

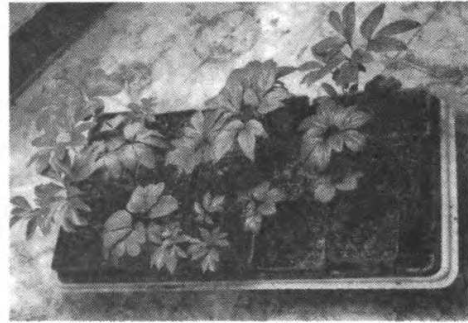
My previous experience has been that plants grown in the field in ideal conditions make so much more rapid growth and multiplication of roots than plants do when grown in pots under any conditions, that the whole technique might be self defeating. However, it might offer an opportunity for other amateur peony enthusiasts to experiment.

This fall I carefully selected seed from more valuable plants to make the same experiments. I used a much smaller quantity of seed than the previous year in the hope I would be able to be more careful with a smaller number. The seeds I planted this time were not just a pot luck selection of mostly Lactiflora peonies, but a careful selection of seed from species, tree peonies, and herbaceous plants not known to usually set seed (in particular **Golden Wheel**, also known as **Oriental Gold**). I hope I will have as much success with these seeds this year as I did the last. With a little luck, I would hope to be able to add another chapter to this story in a couple of years.

I would be interested in hearing what other growers might have to say about this.



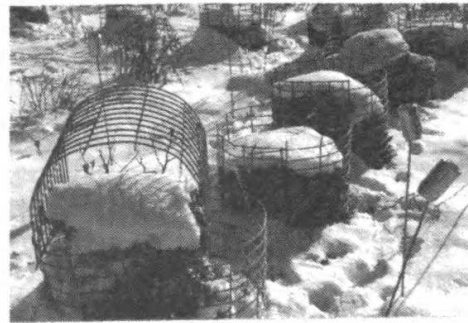
Peony seedlings, July 2000



Seedling peonies, Thanksgiving 2000



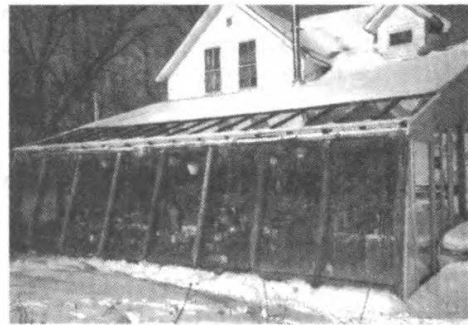
Seedlings & Whimsey, Christmas 2000



Tree peonies in protective cover



The winter garden



Greenhouse, Christmas 2000

Growing Species Peonies

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

Part I—From Seed to Seedling

There are a great many ways to germinate peony seeds. Read the *APS Bulletin* over a few years or read some of the APS publications and you will encounter a myriad of techniques for germinating peony seeds. Just recently I received a letter from a fellow-peony grower that said she knew someone who hung peony seeds in a mesh bag in the reservoir of a toilet. Supposedly the filling and refilling of the tank helped the seeds to germinate. During the past seven years I have found three techniques that work for me. All are techniques that I have read about in the *APS Bulletin* but each technique has been modified through trial and error.

If species peony seeds are reserved in Winter, which so often is the case, store the seeds until late Spring or early Summer. Then soak the seeds in water for 4-7 days. Each day the water needs to be changed. Some of the seeds will get soft—throw those seeds away! Then sow the seeds in 1-5 gallon pots that contain organic potting soil which has been mixed with a little sand. For some species that need excellent drainage, i.e. *P. brownii* and *P. californica*, I put gravel in the bottom of the pots. After watering the pots, they are put on the north side of a fence in the dense shade of a tree in a hole that has been dug which is about two feet deep. (It's really just a cold frame that is dug into the ground). The hole helps to moderate extreme Summer and Winter temperatures. I'm convinced that if species peony seeds get too hot in the Summer they will not germinate. Keep the pots moist until it starts to rain in the Fall. If it gets too cold [below 20°F], cover the cold frame. Using this method, *P. clusii rhodia* and *P. mascula hellenica* are the first to come up, in late January. The last to come up are *P. obovata*, *P. veitchii*, and *P. brownii*. As soon as the seedlings come up then move the pots to a sunny, south-facing location. When the weather becomes warmer, move the pots under a shade cloth where the seedlings will stay until they are planted out in early Fall.

Peony seeds do not always wait until the following Spring to come up in the pots. *P. californica* seedlings will often show their leaves above the potting soil a month or two after sowing. I have also had seeds of *P. mollis* and *P. obovata* start growing leaves in late Summer after being sown in pots in late Spring.

Species peony seeds do not need to be cold stratified before they will root germinate. In fact, placing peony seeds in a refrigerator before sowing is a waste of time. Some species like *P. brownii* and *P. tenuifolia* need fairly cool temperatures to germinate, but do not need to be cold stratified.

The second germination technique I use is the simplest and I'm sure the one most commonly used. Instead of putting all the peony seeds in pots, sow them in a raised bed that is in at least 1/2 shade (seeds planted in at least partial shade seem to germinate better than those in full sun). Plant seeds 3-4 inches apart.

There are two advantages to this technique. One is that the seedlings do not need to be transplanted like those in pots, which means they grow a little faster. Second, a raised bed does not need to be watered as frequently as a pot.

The best time to plant seeds in a raised bed is late Spring, or at the same time they are sown in pots. Species peony seeds sown at this time will often have close to 100% germination.

I also use this technique in Fall (as late as October) for seeds of *P.*

californica and *P. brownii*. Seeds of these two species planted in the Fall will come up in the Spring. For me, seedlings of our two native peonies grow better in raised beds than they do in pots.

I also plant species peony seeds that have been freshly collected from my garden in a raised bed. Some of these seeds will come up the first year after planting and some will come up the second year. Germination of freshly collected peony seed varies greatly by species. I have had 100% germination with *P. japonica* seeds the first Spring and 0% germination of *P. obovata* 'alba' seeds the first Spring.

Species peony seeds are often received in October or November. This is too late in the Fall to use any of the outdoor techniques. So I soak them in water for 3-4 days and put them in quart bags filled half full with vermiculite. The trick is: don't put too much water in the vermiculite. If you do, when the roots start to grow they will begin to rot. Then I put the bags in a basement room that has a constant temperature of 70°F. Leave the bags at 70°F for 30 days. Some species and hybrid seeds will germinate at this temperature. In fact, I have had *Paeonia broteroi* seeds germinate in as little as 15 days at 70°F. Hybrid seeds of *Paeonia suffruticosa* will also sometimes germinate in less than 30 days at this temperature.

After 30 days I put the bags of seeds in an attic room with a temperature that fluctuates between 55 and 60°F. Some species seed will begin to germinate in just a few days at this temperature. Other seeds will take up to 2 months to germinate. The only species whose seed I have never gotten to germinate at these temperatures is *Paeonia obovata*. Generally there are a few seeds in each bag that will not germinate in two months so I save these seeds and use them in outdoor germination techniques.

When the seeds have grown a root which is 1-2 inches long I put the bags of vermiculite in a refrigerator. Some roots will grow faster than others so you might have to have two bags for each group of seeds, one at 55-60°F, and one in the refrigerator. The seeds at 55-60°F should be checked weekly and moved to the bags in the refrigerator when their roots have grown long enough.

Within 2-5 months the first leaf will start to grow on the root germinated seeds in the refrigerator. Before the leaf starts to open and generally when the shoot is 1/2-2 inches long, depending on the species, I plant the seedlings 2-3 inches apart in a 1-2 gallon pot. Then, put the pot in a shady location outdoors until the leaf appears above the potting soil. Once that occurs, move the pots to a sunnier location. If all goes as planned, the seedlings are being put outside during the warm days of Spring.

One common misconception about peony seed germination is that peony seed won't germinate the first year if it is dry. This year I received seed of a species of wild tree peony from two sources. One batch of seed was sent to me moist in a little bag of vermiculite and the other was sent to me dry. I used the vermiculite technique on both batches of seed and I had better germination with the dry seeds than with the moist seeds. For some species peonies it appears that drying, might actually enhance germination.

I've also planted dry *P. veitchii* seed the same day that I collected it. This was in early August. Surprisingly, most of the seeds came up the following Spring but a few did not come up until the second year.

Which of the three species peony seed germination techniques I use is generally dictated by when I receive the seeds. If I, however, only have a small number of extremely rare peony seeds, I will often try to germinate them by using two different techniques. Hopefully, my chances of germinating at least a few of the seeds is much better.

So far, I have only received one packet of species peony seeds that has refused to germinate using all three techniques. It's been two years, but I still have not given up hope that at least one of the seeds will germinate. I think here lies the key to species peony seed germination—PATIENCE!!

Part II—From Seedling to Flowering

There are nearly 70 species, subspecies and varieties of wild peonies. They grow in a wide range of habitats, from the alpine in Turkey to nearly sea level in Cyprus and Crete, from the Kola Peninsula in Northern Finland to the basaltic cliffs of Majorca, and from the canyons of Los Angeles to the Tsangpo River Gorge in Tibet.

Because wild peonies grow in such a wide range of habitats throughout the Northern Hemisphere it makes sense that it would be nearly impossible to use only one method to grow all wild peonies. In my garden, which is 16 miles north of Portland, Oregon, I have, through trial and error, found cultivation techniques which work for most of the wild peonies. These exact same techniques may not work in your own garden due to differences in soil, climate, etc., but they should give you a good starting point for growing these graceful and beautiful plants.

In late August or September, I remove the seedlings from the pots they have been growing in all Summer, and transplant them to raised beds. The raised beds are constructed so that the seedlings will have very good drainage and will be protected from moles, cats, children, birds, and any number of other potential hazards. Seedlings planted in the open garden do not survive as well as those planted in raised beds. They also do not grow as fast as those in raised beds.

Inevitably a few seedlings will not survive the first Winter. The primary reason they do not survive is frost-heaving. Seedling roots are easily pushed out of the ground by this heaving action. If they are not quickly planted back into the ground they won't survive.

Once wild peonies are two or three years old, I move them to their final home in my garden. Most species peonies transplant best at this young age. As they get older and their root systems grow larger they become fairly intolerant of root disturbance. For example, older plants of *Paeonia cambessedesii* can sometimes take three years to recover from transplanting, while young plants transplant without any noticeable check in their growth.

The least demanding wild peonies for me to grow are *Paeonia delavayi*, *Paeonia lutea*, *Paeonia potanini*, *Paeonia potanini* var. *trillioides*, and *Paeonia lutea* subsp. *ludlowii*. I simply dig a hole in some of my better clay-loam soil and plant them like any other shrub, making sure to spread the roots out over a mound made in the bottom of the hole. Then fill the hole with soil and water. I do not amend the soil or worry terribly about drainage. Their only requirement is that the planting hole be dug in partial shade, since they do not like full sun or a warm position on the south side of my house.

Paeonia anomala, *Paeonia mascula* subsp. *triternata*, *Paeonia lactiflora*, *Paeonia officinalis* subsp. *villosa*, *Paeonia mlokosewitschii*, and *Paeonia mascula* subsp. *arietina* can be grown just like "lactifloras" and hybrids. A hole is dug in a sunny place in my garden. Then I discard the heavy clay soil that was dug from the bottom of the hole. In the bottom of the hole put 2-3 inches of well-composted steer manure. Next, mix the soil from the top of the hole with commercial topsoil (compost if I have it), sand, and a handful of bone meal and fill the hole with this mixture.

The peony root is planted at least a couple of weeks later on a mound (a mound will help with drainage) in the center of the hole.

Some species can be grown in the above manner with one major difference—they must have shade from hot afternoon sun. These species include: *Paeonia obovata*, *Paeonia obovata* 'alba', *Paeonia veitchii* and its varieties, *Paeonia ruprechtii*, *Paeonia lagodechiana*, *Paeonia japonica*, *Paeonia wittmanniana*, *Paeonia mascula*, and *Paeonia peregrina*. In the wild, these species grow in the shade of shrubs or under an open canopy of deciduous trees.

Most of the Mediterranean species including *Paeonia cambessedesii*, *Paeonia mascula* subsp. *russoi* and *Paeonia clusii*, and one of our native peony species, *Paeonia californica*, need a warm position and excellent drainage. They also need some shade from the hot afternoon sun. I plant these species on the south side of my house in the shade of two crape myrtle trees. They are planted in raised beds that have been filled with equal parts compost, sand, and commercial topsoil. I also add some turkey grit to improve drainage and a handful or two of bone meal. It is important that the raised beds be at least two feet deep so the peony roots will have room to grow.

Paeonia cambessedesii also does well in other locations in my garden as long as it has very good drainage.

The large-flowered tree peony species such as *Paeonia rockii*, *Paeonia ostii*, and *Paeonia jishanensis* need very good drainage. If the soil they are planted in retains too much water they will succumb quickly to fungal diseases. So I grow these tree peonies in either raised beds (without clay soil) or on a steep slope in planting holes that contain my own compost, sand, grit, commercial topsoil, and some of my best clay-loam soil. I also add a little bone meal and lime to the planting hole.

Probably the most difficult species peony for me to grow well is *Paeonia brownii*, one of our native peonies. After a great deal of trial and error I now use two methods for growing *Paeonia brownii* in a raised bed or on a mound. Both methods require that absolutely no clay soil is even in sight of the planting mixture. The raised bed is made of large flat rocks (the rocks probably add warmth to the soil) and is filled with compost, peat moss, sand, commercial topsoil and some grit. Although the bed is in full sun it receives afternoon shade from a small shrub. The mound is 8-10 inches high and is made up of the same planting mixture used in the raised bed. It has a western exposure with no afternoon shade. I have had plants of *Paeonia brownii* that were grown from seed bloom on the mound and in the raised bed.

These two methods also work well for growing *Paeonia tenuifolia*, as long as it receives afternoon shade.

Paeonia hybrida is the only species that I have found to be nearly impossible to grow in my garden. However, it grows extremely well in my parent's garden in Iowa. *Paeonia hybrida* grows in the harsh steppe climate of Northern Mongolia, so quite possibly it needs colder Winter temperatures than can be found in my garden.

The key to growing any peony species well is to learn a little about where a particular species grows in the wild. Then use this information to experiment in your garden.

Species peonies are a bit more difficult to grow than "lactifloras" and hybrids, but their charm, elegance, and beauty more than make up for the extra care.



Written by one of the great peony growers in Canada. Bulletin #81, December 1940.

Peonies that are on display at the National Exhibition, Royal Botanical Gardens are later distributed to hospitals. A dream realized of Mr. F. Trafford Taylor.

The Peony—A Glorified Rose

by F. Trafford Taylor, K.C.

Past International President, Kiwanis International
St. Boniface, Manitoba, Canada

You may be a peony lover, but in case you are not, here are a few of the highlights and interesting facts about this wonderful flower. The perfect peony is certainly nature's most gorgeous floral masterpiece.

The peony has been aptly named a glorified rose, and is native of the steppes of Siberia, in its single form, where it grows wild.

The Orientals cultivated it many centuries ago, having numerous peony Societies in Japan and China.

It remained for the French specialists, after the French Revolution at Nancy, near Paris, to develop in a peony garden, which is still in existence, the wonderful double peonies. Some of the most striking of these modern double peonies are **Le Cygne** (the swan), a beautiful pure white delicately petalled flower, some nine inches across, as white as the driven snow, **Sarah Bernhardt**, bomb shape, pink, of an enormous size, bearing prolifically year after year, and **Marcelle Dessert**, a delicately tinted flesh pink.

The great French growers at Nancy were Calot, Crousse, Dessert and Lemoine, the garden passing from family to family, and from father to son.

The French growers grew for delicacy of form, producing such exquisite perfect blooms as **Solange**, a dark shaded cream, resembling a typical sunset, and **Philippe Rivoire**, a delicate red of lovely shade, **Emile Lemoine**, one of the latest blooming peonies. The English grower, Kelway, produced enormous peonies called **Kelway's Glorious**, a peony measuring almost a foot across.

The Americans produced some wonderful peonies, particularly Brand, the Elder and Junior at Faribault, Minnesota, who have given the world some of the finest reds, including **Brand's Magnificent**. The further north, the better the red color, and the peonies prefer a long closed winter, as a resting period preparatory to producing in a moderately warm summer season, their glorious blooms.

Karl Rosenfield is a very fine American red—dark crimson, producing particularly fine flowers of good texture, quality and quantity, and most suitable to the home grower.

I have often thought that it would be a splendid, and very useful objective and activity, for Kiwanis clubs, particularly in the North and North Western parts of the United States and Canada to encourage and popularize the growing of peonies, so as to develop peony shows and in the blooming season, to distribute as many as possible to the sick and bedridden. I may say that to date this year, Mrs. Taylor and I have cut upwards of 25,000 peony blooms, and distributed them to the hospitals throughout greater Winnipeg and St. Boniface, including the invalid soldiers and apparently they have been appreciated; also YMCA Army Hut at Shilo Camp.

I have a twenty-year-old acre plot, of some 3,500 peonies, of the best varieties, gathered over the years from Europe and the United States and at this time of the year it is a very fitting service activity in my opinion, for

Kiwanians to use their surplus flowers to brighten the sickrooms and hospitals. I also grow at home some 20,000 annuals, of different varieties, as a follow-up flower for cutting after the peonies have finished blooming.

The gathering and cutting requires considerable time, but if a number of Kiwanians work together in a group, they could establish a regular flower car to gather blooms of the members, from time to time, throughout the season, and take turns in distributing some to the hospitals and other institutions.

Peonies are probably the best investment one may make, in the line of flowering perennials, as I understand there are peony plants in the states of Massachusetts and Pennsylvania 125 years old, and like Johnny Walker, still going strong.

The Greeks in olden days had the European variety comparable to our quite common early **Red Piney**, to be found in every front yard behind the white picket fence of the early Americans. The ancients considered the peony as a lucky charm and a good omen, to ward off evil spirits, and no house was without one plant, for this purpose.

The young people often wore the roots around their necks, in necklace style, as a charm and a lucky rabbit's foot, to guard against evil and bad luck. They also considered the peony of considerable medicinal value and generally it has been held in greater respect and reverence throughout the centuries than any other known flower.

Roses may be grown to perfection only in certain states and provinces, but the peony is universal and I sincerely recommend it to every community throughout the domain of Kiwanis on this continent, to bring not only joy and satisfaction to its owner but to brighten the eye of the sick and afflicted.

The greater portion of the peony roots have been imported yearly from Holland, but this market is now closed, and we in Kiwanis might do well to encourage the peony growers and producers in North America, by making it possible for urban and rural flower-loving groups and agricultural societies to obtain and develop this truly wonderful flower, in larger quantities and at a reasonable cost.

The above sketchy outline of the peony is, I realize, a very poor and inadequate description of this truly magnificent flower. I apologize to peony enthusiasts for the lack of detail but I am speaking as a true lover of the peony, as a grower, and as a zealous enthusiast, for peonies happen to be my particular hobby for the past twenty years.

May Kiwanis everywhere more generally respond to the club activity of "Flowers to the Sick." It has been said that this simple action has an eloquence of thought and feeling which speaks all tongues. May the peony continue to prosper and flourish and thus bring joy and gladness to the world.

The following is a resume of certain helpful suggestions concerning the development and growth of the peony gathered and gleaned by the writer from actual and practical experience over the years.

Here are a few guides to explain in detail the way to plant and care for peonies, so that the most inexperienced may grow them and enjoy their beauty.

The peony is one of the best perennials for this country. It is very reliable, and most varieties continue to grow for years undisturbed, yielding a large quantity of bloom for a short period each year and for the whole season until frost, a low (30 inch) foliage plant, clean and attractive.

The peony is not particular as to soil. It will grow in rich or poor clay, sandy loam or black soil. A fairly rich soil is perhaps the best, but it will thrive in any soil that is not acid. Peony beds should be well drained, so that surplus water in the springtime gets away quickly, because water remaining

on beds, even for a few days, is fatal to peonies.

Peonies should be planted in the fall—from September to freeze-up—preferably the last week in September. The reason for this is that if the plants are dug too early, the eyes of the crown, which will be the stems next year, are not sufficiently developed.

Spring planting has at times proved satisfactory, but it is dependent on the condition of the roots. Do not plant in the spring in this country. A percentage of roots will become unthrifty, and, once in that condition, they rarely recover.

Peonies should see the sun for at least half the day. They may be effectively planted in beds by themselves—this is the ideal way—as a foreground to the shrubbery, as a low hedge or dividing line, or to border a walk.

If peonies are planted in front of, or near, shrubs, make provision for preventing the roots from interfering, because peonies will not grow well in soil impoverished by shrub or by tree roots.

Dig soil two feet deep. If the lower foot is a cold, grey clay, remove it and fill in with good garden loam. Remember that the peony plant is to remain for years in the same location. Don't put any manure under peonies. Peonies must be given a space at least three feet square each, and four feet square is much better. The plant will not entirely fill this space until about the fifth season.

The eyes on the crown of the plant should be two to three inches below the level of the ground. If too deep they will not bloom; if too shallow they will suffer from frost. Dig the soil at least a week or two before planting, and water well to settle the soil. If planted in newly-dug soil, and the eyes are set two inches below the level, by spring the plant would have sunk many inches more. The final depth of the eyes is to be two to three inches, so make allowances for soil settling, and if you are afraid of frost damage, mound soil over each plant for the first winter.

Wood ashes are safest and best, but not always obtainable. Use bonemeal; dig in or hoe in from half to one pound per plant per year. Apply preferably just after blooming, July 1st to 15th, to aid the plant for the following year. Do not put bonemeal in the ground within twelve inches of the stems. Do not use manure.

The ground should be hoed deeply throughout spring and summer. This will supply air and additional vigor and will cause the roots to go deeper.

Non-blooming is sometimes caused by the plant having sunk too deeply into the soil. If any plant does not appear to be a strong, vigorous grower, the soil could be scraped away from the stems to a depth of six inches, so that the condition of the crown could be observed without disturbing the feeding roots. This should be done early in September.

There are two diseases prevalent among peonies in this country, and they are easily detected by the amateur. The first is "Nematode" or root gall. On the large roots it appears like a succession of swollen joints, and on the fine roots like little ball-like adhesions.

The second disease is a rot that starts on the crown at the base of the old leaves and develops like a brown pithy rot running through the center of the thick roots, and finally destroying the whole plant.

Do not plant a peony that shows the least evidence of either disease. Burn diseased plants. Don't bother with them.

Ants visit the peonies in large numbers to obtain the nectar from the buds, but they do not damage the plant or the buds.

Standard divisions have three to five eyes on the crown, which would lead one to believe that three to five stems would show up in the spring. More frequently one to two or three stems will appear the first year,

because there is not enough root system or new root growth to supply and support more stems. The ideal root to buy is one that has been grown one year after being divided.

Do not buy large clumps and expect them to bloom the first year. Experience has demonstrated that large roots never become established or bloom successfully. The peony when transplanted has to make a new root system, and this takes two to five years. This means that too much must not be expected from a peony until the third summer.

The flowers are formed at the top of each stem. Usually there will be a large terminal bud and several side buds. If all these buds are allowed to develop, the strain on the plant is increased, and frequently the side buds will not be open at the time the bloom is cut. It is generally considered advisable to take off all but the terminal bud. These should be nipped off with the fingers when about the size of a pea.

Two leaves must be left on the stem when cutting as these help to feed the plant and produce eyes for next year. Use a sharp knife, and cut on the slant. Early morning is the best time to cut the bloom, as it has had a cool night to be refreshed after the previous day's sunshine.

As peonies are planted with the idea of blooming many years in one place, and in view of its taking two to three years to bloom, it is highly important that the soundest advice be given in the matter of selection. There are hundreds of varieties and a wide variation in quality. Price does not necessarily indicate quality. Some of the finest peonies are among the lowest priced. Some peonies are exceptional for charm and delicacy of texture and color, but are not consistent yearly bloomers.

This is not for the benefit of the peony specialist; it is meant to be a reliable guide to the beginner.



HOW TO CUT PEONIES

Peony show time approaches, and many new exhibitors have questions in mind which they would like to have answered.

Setting dates for peony shows which would suit all gardens is obviously impossible. Some gardens are early and some are late. Some peonies are early and some are late. It is our endeavor to set the show date at a time when the majority of growers can bring their blooms direct from the garden. Those who have extra early locations and those growing the extra early hybrids will have to resort to refrigeration to hold them until show time. In order to do this, it becomes necessary to cut the peonies at the proper time and place them in storage. A temperature of thirty-six degrees is best, but a temperature as high as fifty degrees is satisfactory if the blooms are to be stored for a week or less. Blooms can be kept for over a month when stored at thirty-six degrees. A very important point to keep in mind is that blooms should be chilled for several hours before being brought to the show room. This chilling prevents wilting. Peonies are best stored with the stems in about eight inches of water.

Most new exhibitors are also troubled as to what stage of development buds should be cut. The following types may be cut when the bud is showing color or when the first petals begin to unfold: singles, Japanese, semi-doubles. The full double type such as **Douglas Brand** should not be cut until almost fully open. It is important to place in cold storage as soon as possible after cutting.

It is a good practice to place the buds in paper bags before placing in storage. The procedure is this: cut a hole in the bottom of the bag and slip the stem through the hole—the open end of the bag is then closed by twist-

ing. The bag gives protection to the petals against bruising. The one-pound bag is about the right size for singles, Japs and semi-doubles, while the two-pound bag is more satisfactory for the larger and fuller blooms.

Cut stems about sixteen inches long and remove all foliage except the top leaf. However, the stems should be cut so that at least two leaves are left on the plant. When the buds are brought to the show room, cut off the ends of the stems about a half-inch, place in water, and carefully remove the paper bag. It's a thrilling sight to see the buds unfold into beautiful blooms, and it is even more thrilling to see a ribbon pinned on your exhibit.



Peony Shows

by G.W. Peyton, Rapidan, VA

It will be a great day for our shows when our Board of Directors can get to the point where they can arrange the place for the show three or more years in advance and then we shall have no excuse to offer for not having every class amply represented by blooms from mature plants, and some of the best quality. Again it seems to me that every member of this Society who, by any chance could possibly make an exhibit, should take pride in trying his best to make as fine an exhibit as possible in just as many classes as possible, and bend every effort to this end. They should realize that it is a great honor to be permitted to stage the greatest peony show in the world and they should be willing to spend their time and their money to the limit to make the show a great success.

It takes time, it takes money, but above all, it takes hard, painstaking work, especially in handling the blooms, but they should be willing to do it for the sake of the honor of their show. The show committee members should be appointed and begin work as soon as they know they will have the show. They should list all prospective exhibitors and get them to promise an exhibit. They should even go so far as to get a very good idea of the classes in which each exhibitor will exhibit and have them prepared to make the very best possible exhibit in these classes. They should be prepared to show everyone how best to prepare their plants for producing the best blooms so that when the year of the show comes they will know what to do and when to do it, for the quality of the bloom depends very largely on proper cutting and storage. They should especially locate plantings of singles, Japs and tree peonies and, if possible, have plantings made of these and the new ones so that these very interesting classes may be well filled. The general public goes to these shows to see beauty; many to pick out varieties they would like to plant, and so it must be seen so that we have beauty to show them and that they will see the very best of the old and the new shown in the very best way, and only by proper preparation for several years beforehand can this be done.

Our peony men go to these shows to see what new thing is worthwhile and so every effort should be made to have as many of the new things shown as possibly can be and so let all see for themselves the manner of best it is.



Archie Mack Brand

submitted by Dr. Tom Christiansen, Edina, MN

Archie Mack Brand was born in Faribault, Minnesota in the house on the Brand nursery grounds on February 28, 1871.

My first memory is of running out in the front yard of the old home on a

late May afternoon in 1876. There had been a shower in the afternoon. The clouds had rolled away and the evening sun had come out bright and warm. Mother was sitting on the steps to the front entrance of the house while father was puttering amongst the shrubbery in the front yard. I was barefooted with my pants rolled up, running around in the wet grass. Mother called me to her and told me to sit beside her. As I sat there I noticed a sweet perfume in the air. Upon questioning her about it she said, "the lilacs are in bloom and it is their perfume that you smell," and then she pointed out to me six big bushes, three on either side of the path leading from the house to the street in front, and told me they were the lilac bushes. As I followed her talk I noticed in the rows between the lilac bushes were smaller plants covered with big red blossoms, and upon asking her what these were she told me they were peonies. Afterwards I learned they were *Peonie Laciniata*, the fern leafed peony. And so it is seen that my first memories of life were of the lilac and the peony which afterwards in life became the main thing in my life work.

Later on that same summer of 1876, one other occurrence was so startling to my young mind that I still recall it vividly to this day. It was on an afternoon in September, I would say about 4 o'clock in the afternoon. I had been out all afternoon playing in my sand box, and became hungry. I had gone into the house to ask Mother for a slice of bread and butter. We were standing at the kitchen work table. Mother cut a big thick slice of bread (homemade) and was just starting to butter it. I stood looking up at her when suddenly the kitchen door was thrown open and my Uncle, Mother's brother burst into the room. He was a very excitable man and he was terribly excited that day. Mary, he said, the bank has been robbed in Northfield. The cashier was shot and killed and the robbers have escaped on horseback. They have taken to the woods to the west. The sheriff is organizing a posse and wants men and horses and guns. May I take a horse and go? Mother said, yes. Uncle stepped to the kitchen wall, took down his long Kentucky rifle, threw the bullet pouch and powder horn over his shoulders, went out and saddled our favorite horse Jin and was gone. Two days afterwards Uncle returned empty handed with a very jaded horse.

Three or four days after the escape of the robbers, they were located in a little piece of woods around a lake near Madelia, MN. Jesse James and Frank his brother had escaped but Cole Younger and Bob his brother stayed and surrendered with the third brother Jim who was wounded and could not travel any further. The prisoners were brought back to Faribault and jailed. They were tried, convicted and sentenced to life imprisonment in our state prison at Stillwater, MN.

We left for Sherwood, Tennessee about November 10, 1883 and were located on a plantation of something over one thousand acres. This lay about a good mile to the south east of Sherwood, along both banks of Crow Creek, which is a mountain stream about as large as the Straight River in Faribault.

In the early spring of 1885 we moved about one hundred miles north west from Sherwood to McMinville ? which is a nice little city of some two thousand people and is located practically in the center of the state N&S and E&W. Father had become interested in making sorghum molasses from Minnesota amber cane? He had planted some 30 to 40 acres of the cane in the spring of 1883. We had a fine field of cane. He had purchased a pressing machine and had it set up at Faribault. It was a complete little mill for processing the cane. Our cane had been well cared for and was very promising when one of the earliest killing frosts of which Minnesota has any record, struck us about the 25th of August and took all the corn and cane in the state. We tried to save a little of our cane crop but it was no use. We made up some 20 barrels of sorghum from the frozen cane but to no use it all spoiled on us.

Archie Mack Brand was born son of Oliver Franklin Brand and Mary Mack Brand on the 28th day of February, 1871, at Faribault, MN.

At the age of eight years he started school in the little brown school house located at the corner of 2nd Street and Mott Avenue in Faribault. At the time this school had but one room that was occupied. The desks were all two student desks and Archies desk mate for the first year was a fun loving Sioux Indian boy, by the name of Henry St. Clair, his father was an Episcopal Missionary Minister.

In 1877 Brand's father took up quite a tract of government land in the town of Ash Lake, in Lincoln County in Minnesota. The family went to Lincoln County in the spring of 1878 to prove up on this land. The trip was made by pioneer train loaded with new settlers all going west to take up government land. The Brand land was thirty miles west of Marshall. The trip west from Marshall was made by train and lumber wagon. Eight miles out from Marshall, an over night stop was made at one of those old time western taverns. Everybody and some of the dogs slept in one big room mostly ranked along on the floor. The Brand family had a room made by stringing rope above the bed and making the walls out of suspended horse blankets.

About twelve miles out from Marshall the raw prairie began. Not a tree or a horse was in sight. And from there on for eighteen miles the road was across a grass strewn, almost trackless land. Some where about five o'clock rounding a hill we saw before us some brand new unpainted buildings, the new Brand home. Here for two years the Brands spent the summers improving up on the lands. Father in the mean time had accumulated quite a herd of cattle, over a hundred in all. My brother Norton and I had to herd these cattle during the summer time. Each had a pony and a dog. Although the country was settling up fast there were still many large open spaces of good range. By the fall of 1889, we had fulfilled the improving up requirements and the family returned to Faribault. There, father was content to run the nursery business.



Percy and the Peony©

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I have just concluded researching and writing an article about the phenomenal Saunders family for my bimonthly publication The Rosebank Letter. Part of the story will interest peony growers.

William Saunders came to Canada as a child of 12 with his parents and nine siblings from Devonshire, England. It was 1848. The family settled in London, Canada West (now Ontario). He didn't have much book learning, but he had boundless opportunity in an immense newly developing country. When his life ended in 1914, as WWI began, he had changed this country indelibly, having recommended, established, and directed for 25 years the network of Dominion Experimental Farms that gave this nation the kick-start needed to make settlement of the prairies an agricultural and economic reality.

At 18, William Saunders apprenticed to a druggist for two years, then started his own drug business. He was the first to make fluid extracts. The demand propelled him into manufacture and retail of them, and it was a roaring success. He married a sweet, gentle helpmate who supported his many lifetime ventures. Her name was Agnes and any relation to the rose of that name is purely intentional. In their first home over the drug store, he helped organize the Medical School in London. then he

taught on its faculty, illustrating his lectures with drug samples he made. He was once president of the Ontario College of Pharmacy. Then he began the study of entomology, eventually writing the standard text on the subject and starting the Entomology Society. Its studies helped Canadians control insects such as the Colorado Potato Beetle.

In 1862, he went on to the hybridization of all manner of fruit trees, small fruit and flowers. Eventually his activities brought a request from the Canadian government to study how to assist agriculture adapt to a cold climate, and thus relieve a depression by expanding the economy. His exhaustive report resulted in his appointment as the first director of the whole Experiment Farm system, which is with us to this day. He had to move his home to Ottawa for the quarter century he shaped and ran the operation. But then, he moved his home back to London, where he died. And that was how one immigrant kid altered the course of our history. Yet, after all the honorary degrees and orders, we have practically forgotten him. As outstanding as his accomplishments were, the most astonishing thing was the family he and his well-educated wife reared.

Six children, a girl and five boys, were shaped by their home life to become famous in their own fields: Annie Louise (family pillar, photographer, music critic), William Edwin (businessman, naturalist, tenor), Henry Scoley (professional cellist, authority on Whitman), Charles Edward (professor of chemistry, music instructor, knighted for developing Marquis wheat, French literary contributor), Arthur Percy (professional of chemistry, musician, peony hybridizer, college dean), and Frederick Albert (professor of physics, ornithologist, musician). Simply amazing. Or was it? Agnes Saunders saw to it that as children they did not reckon success in terms of money grubbing, but had a wide appreciation of the fine arts and music in particular. She read to them daily around the living room table—quality books they never forgot—with life affirming models that bear no comparison with TV cartoons. Each child learned to play one or more instruments, so that throughout their lives they vacationed together by performing recitals or concerts. Each child also started scientific collections, which fueled their future interests. And over all was a self-effacing social consciousness shaped by two grandfathers who were Methodist pastors. William Saunders took the children wherever he went—even to the orchard where they all participated in his hybridizing programs and insect studies. Their talents blossomed.

This story must limit itself to the mark made by just one of those kids—Arthur Percy Saunders (the Percy of the title). He was the fifth child in the family, born 22 March 1869 in the family's new home on Dundas Street between Waterloo and Colborne where the Campbell Memorial Park is situated to mark the site, and a bilingual plaque has been erected by the government. He went to London's public and collegiate schools, then on to U of T for a BA degree. Then to Baltimore's John Hopkins where he obtained a PhD in Chemistry in 1894. But along the way, he studied violin so that at 13 he played in a string quartet at the first concert given by the Saunders family in London. He had art classes on summer vacation at Murray Bay (now Malbaie) in Quebec; more in Brittany followed by travel in both France and England with brother Fred. He and his brother Charles helped their father in the hybridizing of earlier-ripening wheat begun when William Saunders was given the directorship of the Dominion Experimental Farms. By hand pollination, the boys and their father crossed wheat flowers with varieties from many foreign sources. Charles's meticulous standards and perseverance were recognized, resulting in his being pressed by his father to assume the lead in the crusade, and his success is a whole separate story ending with his being knighted

by King George V. Author Edwin Seaborn said "It is probable that in 'Marquis' the greatest addition to the wealth of the world was made."

Percy Saunders' professional career began as a chemistry instructor at U of Wisconsin. Then there were two years of post-doctoral study in Germany. Then he was a research assistant at McGill; next a research fellow at Cornell; then an assistant professor at Hamilton College, Clinton, NY. Here he found his spiritual home. It was 1900. Hamilton College was founded in 1812, a few miles north of Utica. Beautiful vistas even catch the Adirondacks. Its students grow up getting all-round education in addition to formal studies. Sports, drama, music, chapel, self-expression—all these things exactly suited our many-sided subject. Students enjoyed being near him, and share his interest in music, art, literature, and astronomy. he radiated enthusiasm in their midst and formed string quartets with them, assisted in organizing a Musical ART Society, which invited guest ensembles to give concerts for the students. He was sort of Mr. Chips. He was promptly made full professor of Chemistry, and in 1909, appointed Dean of the college, a position he held for 30 years. Now we get down to peonies.

Professor Saunders grew up in a home where hybridizing was as commonplace as combing your hair. He may have been the boy that made the Marquis cross. When the College gave him a house on the campus, he surrounded it with roses, irises, lilies, and phlox. He was soon crossing them. He introduced 'White Knight' iris, 'Mary Louise' phlox, and then he became absorbed with peonies. He collected every kind of peony. The rose-colored single 'Silvia Saunders' was one of his first cultivars. His campus garden was soon too small for his work, so he bought a strip of land near the college (just as his father had done in London years before). Then he produced so many well accepted varieties that his reputation as a peony hybridizer became well known among horticulturists in Canada and the States. Three years after his first campus garden, he joined the American Peony Society. Eventually he served as its secretary and then president.

In 1916, he influenced the founding of its Bulletin, and edited it for the first 16 numbers. He initiated the society's system of rating peony excellence. In 1928, he received the highest award, the President's Cup at an exhibition in Boston for his tree peony variety 'Argosy'—lemon yellow, with red markings in the centre surrounding the golden stamens. He won awards regularly including the Scott Award—a medal and \$1000—to the person who has contributed most to horticulture. He was an achiever just like all the rest of the family. Professor Saunders married well. While he was at Cornell he met Louise Sheffield Brownell, Dean of Women at Sage College. She was a graduate of Bryn Mawr, Oxford and Leipzig. They married in 1900 and had four children; Duncan (died accidentally at 15), Black, Silvia (who continued her father's peony business) and Olivia. When Percy Saunders retired at 70, he had more time for other interests. He helped found the Chamber Music Society in Utica, and served as its president. He played in the Utica Civic Orchestra. He had more time for his peonies and writing about them. He attended all the football and hockey matches, and the concerts and drama events. Students met in his home, so did faculty, alumni and trustees—people like Helen Hayes, Robert Frost, Carl Sandburg, and John Masefield—all distinguished themselves. Even after his parents died, he and his siblings continued to vacation together, bringing their offspring, and to have recitals as was their custom. Most of them are buried in London's Mount Pleasant Cemetery, near where their father hybridized the pale amber rose 'Agnes.'

Percy Saunders died in 1953. A music colleague at his college wrote "For those of us who loved him and knew the breadth of his interests, the depth of his understanding, his encyclopedic knowledge, the variety of his accomplishments, Percy Saunders was a unique, incredible being. Yet he moved among us so simply with that quiet amused charm of his, unaware that he was in any way set apart from the rest of us. By nature even-tempered and calm, he never appeared rushed, flustered or irritable. If he was troubled or hurt, he found solace in making music or turning to Mother Earth. His ashes are buried in the cemetery of the College he loved. On his grave a plant of Argosy keeps watch."

We Canadians don't look among our own for heroes (we should) and we have never realized the whole bunch of role models that every one of this amazing family provided. Last year, I was given a tree peony called 'Angelette.' It is a yellow single with red throat. And I am fiercely proud that it was hybridized by someone who grew up here in my own city—Arthur Percy Saunders.

—*Canadian Peony Society, Peony C to C,*
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Cultivation of Peonies—Amateur and Professional

by C. W. Bunn, St. Paul, MN

- Planting and care • Disease • When to cut buds for showing • Disbudding
- An answer to your many questions in this condensed information article.*

Peonies will do well in any well-drained, fairly heavy garden soil where they have not been grown before. I should not try to grow peonies, and should not advise others to do so, in a very sandy soil. Neither do they thrive in peat. The clay loams common in the northwestern states grow as good peonies as the world produces. Peonies should not be asked to compete with the roots of trees or even of shrubs, and anyone unable or unwilling to give them this freedom should plant something else. In the small garden it is often necessary to plant a peony root where one stood before. But before this is done the old soil should be removed and replaced by new. A hole should be made as large as in planting a new bed; one which will hold enough fresh soil to feed the new plant for years. It will not thrive on its predecessor's leavings.

As to planting, the amateur's aim is different from the professional's. The nurseryman expects to divide and sell his roots by the time his plants are three years old. He may commence dividing and selling when they are two, and will sell as fast as he can. His business is the growing and selling of roots and his interest is to sell roots while they are young. He plants each year a field of peonies to stand for a short time. As the roots are dug each field is for years given over to other crops. On the other hand the amateur's main purpose is flowers. He wants plants to produce good blooms over as long a period as possible.

The professional grower is likely to plow under a cover crop before he plants a field and this furnishes good fertilization for a limited time. As he does not expect his plants to stand for ten years, there is no reason why he should make deep trenches and put ten years' supply of plant food in them. The amateur on the other hand expects his plants to stand for many years—certain varieties at least will do well for ten years or even more.

Hence for the amateur, aiming for the best results with his comparatively few plants, advise is sound to excavate his ground two feet deep; to fill up the lower foot with a mixture of equal parts of good soil and manure, and fill up the top foot with the very best soil he has, which should be wholly free from manure. My peonies are grown where here is a great fall of forest leaves, of which I annually compost a large pile, mixing with them as they are put up a little dirt which promotes their early decomposition, and adding as the pile is made some bone meal from time to time. Mixture of this compost or any other good vegetable compost with the soil will pay richly.

Let the amateur realize that he has many advantages over the professional and that there is no reason on the whole why he should not produce as good flowers. The professional grower has the advantage of choosing flowers from a great number of plants, but the amateur can give his few plants a better planting and give each plant a personal care and attention impossible for the professional. The professional has but one advantage (this is considerable)—a large number of plants. If he wants to show Martha Bulloch he may be able to select blooms from thirty plants against the amateur's two. But the amateur can plant his plants better and give them better watering, cultivation and attention than the professional. Therefore he need not despair of competing successfully.

The needed care and attention consists mostly of water and cultivation, and of these cultivation is first. The plants should have an abundance of moisture while they are making their buds and blooming—from April to about the first of July in central Minnesota; also in August when next year's shoots are forming. Lack of rain during these periods should be supplied. Surface sprinkling is useless, or worse. What is needed is an occasional soaking, giving a quantity of water which will wet the ground deeply. Cultivate after every rainfall and after every watering; the more frequently the better.

One is frequently asked if peonies are not gross feeders and how they should be fertilized. If planted as described they need very little other fertilization and will get on well without any. Water and cultivation are the essentials. One sees more peonies ruined by manure than are injured by its absence. Manure should not be permitted unless it is buried at least a foot deep. By the time the roots reach down to it, it has ceased to be manure. An annual dressing of bone meal worked into the soil between the plants not on them, is safe and useful, as are wood ashes similarly applied.

Beware of too deep planted and by all means avoid the possibility of standing water. Peonies cannot be grown successfully where drainage is poor. Plant the eye two inches below the surface. An excellent method is to set the eyes just a bit below the surface and hill the soil up over the new plant, so that during the first winter its eyes may be buried at least four inches; remove in the early spring enough of this cover to leave the eyes two inches deep; and the plant standing on a slight hill insuring against standing water.

As the amateur's plants are to stand for many years he must give them corresponding room to grow. Three feet apart is a minimum and three and a half or four feet is much better. One is always surprised to find how in a few years peonies three feet apart crowd each other.

Be careful in cutting flowers to leave ample foliage on each plant; at least two branches with foliage on each stalk cut. I knew of a lady once who bought a fine and expensive root which the first year sent up one stalk and bore one beautiful flower. The flower was so wonderful she cut the stem practically to the ground to prove its wonders to a friend; but she

ruined her plant. Every flower stalk cut below the foliage dies and rots; this rot will probably extend into the crown and seriously injure the root.

Well planted plants will bear flowers a number of years. Eventually they will need division. When a plant gets too big it sends up smaller stalks which bear smaller flowers. When these symptoms moved without division. To divide, dig the plant carefully, saving as much root as possible, wash the dirt off clean so that you can see where to make proper cuts, and cut the plant up with a sharp knife into divisions having anywhere from one to half a dozen eyes. A good root with one or two strong eyes makes a better plant than one with a large number of eyes and a poor root. Young plants from two to four years old make better divisions than old ones. Therefore it is good practice to have two plants or more of each variety so that if more roots are wanted one can be divided.

The only diseases of peonies are diseases of the root, which will not be serious if a few simple precautions are taken. One ought to be very careful to plant nothing but clean roots. Any stalk becoming rotten at the bottom and falling over should be promptly cut out as near down to the crown as possible and burned. If clean roots are planted where the drainage is good and manure is kept away from them they are very unlikely to develop root rot or other root disease. But if a plant is evidently doing badly, and does not recover good condition within a year or two, take it up in September. Doubtless some root rot will be found. Cut it out, divide the plant and replant in clean new soil. Dividing and planting peonies is best done in September. It may also be done later in the fall, but September planted roots do better the first year than those planted later. Spring planting is not advisable. Cut the tops after hard frosts and burn or remove them from the garden.

A common question is how long should a plant stand. To this there is no answer. Usually a plant produces its best flowers between its third and seventh year. But varieties differ greatly. Martha Bulloch makes slow root growth and I have two nine-year-old plants that were at their best last summer (at present one of them will be divided), while Suzette grows so big in five years that it needs division. One who will study each plant closely should be able to tell when division is required.

Peonies cut after the bud softens thoroughly will develop better flowers indoors than if left in the garden, and this is particularly true of varieties of delicate coloring. The sunshine, especially if hot and bright, and the rain and the wind injure and may play havoc with them. If the best flowers are desired buds should be cut when they are partly out, when they are thoroughly soft to the touch of the fingers, and allowed to develop in a cool, dark room or cellar, their stems in as deep water as may be. Shortly before buds reach the stage to cut, cover the best buds with a paper bag such as peanut vendors use, fastening it with a rubber band or with a wooden peg or skewer. When flowers are sent to cold storage for keeping these bags can be left on them.

Disbudding—pinching off each side bud leaving one bud to each stalk—increases flowers in size. On a similar principle, size can be increased by removing all buds from a part of the stalks.

If flowers are to be shown, those blooming early will have to be kept in cold storage. A room kept at about 40 degrees will keep flowers in good condition for two weeks or longer. The beginner in showing will be interested to find that some varieties must be brought to much fuller development on the plants before they are cut, than others. For example, Therese is a difficult flower to show; it blooms early, must be sent to storage and the flower must be nearly full out before cut from the plant. It should be covered with a bag well before this. There were Lady Alexan-

dra Duffs at the Northwestern show last June, of great possibilities, but which did not open because they were cut slightly too soon. There are other varieties that may be cut as soon as the buds become soft and may be relied on to come out at the show. Massive and closely built flowers (La France, Solange, La Lorraine for example) should be left to develop more fully on the plant than loosely built flowers like Judge Berry and Festiva Maxima. The getting of flowers to the show in perfect condition and learning the differences between the varieties for show purposes is of never-ending interest and is a field which is also open to the amateur.



REGISTRATIONS

MME. EDNA POWER (J. E. Simkins, Oakville, Ontario, Canada—2000) Seedling number L6J IV7. Second generation seedling of Pehrson's Best Yellow. This early herbaceous hybrid is very fertile with a high seed count. The large single flower is a soft white with a very pale lemon undertone. The semi-flat flowers with petals of good substance are held upright on 30" sturdy stems, one bloom per stem. The plant is a vigorous grower with large substantial dark green leaves.

LADY LIBERTY (Harold Entsminger, Cut Bank, Montana Jan. 2001) Seedling number N/A. Parentage **Sport X Great Lady**. Single hybrid. First bloomed 2000. RHS Red color group 40-B. Cupped form, stamens, good substance, one bud per stem, reliable, good amount of bloom. 20 inches high, with good stem strength. Mid June in Montana. Vigorous. Same exact plant as **Great Lady** only flower color is bright flame red, not light pink as is **Great Lady**. Cold hardy.

FLAMING STAR (Don Hollingsworth, Maryville, Missouri, Jan. 2001) Seedling number 1613. Parentage **Big Ben X** unnamed Saunders **Little Reds** hybrid. Single, herbaceous hybrid. First bloomed in 1984 or earlier. Scarlet red, accented by a small cluster of light yellow stamens. Flat form, stamens, pollen, good amount of bloom, with one per stem, fragrant, medium short 24-28", good stem strength, early / mid bloom, good medium foliage, twelve petals, single type flower, bright, smallish flower on a bush of similar scale, medium fine texture adapted for a mixed perennial border.

PINK TEA CUP (Don Hollingsworth, Maryville, Missouri, Jan. 2001) Seedling number 1720. Single herbaceous hybrid. Parentage **Laddie X Moonrise**. First bloomed in 1991. Deeper shade of creamy pink (RHS color 50-B) color uniform, equal from base of petal to top, in filament and stigma. The pink is accented by light yellow pollen anthers. Stamens, seeds, good amount of bloom, with good substance. Reliable one bud per stem, fragrant. Good stem strength, cupped petals medium size flower, to 5 inches prolific increase, peregrina ancestry, bloom early good stem strength, short 15-18" foliage divided into blunt segments.

ANASTASIA (Don Hollingsworth, Maryville, Missouri, Jan. 2001) Seedling number 2106. Lactiflora, full double. Parentage Hollingsworth No 1713, a pink Japanese type X unknown pollen. First bloomed about 1991. Fuschia pink develops silver edges as the flower ages/ Reliable, stamens and pollen flat form, good substance 1-3 buds per stem, abundant amount of bloom, fragrant. Medium height, 32-36" strong stems. Mid season to mid-late bloom, vigorous, medium green foliage. Very large medium pink double with few stamens may have one or two side buds. Big bush. Center of flower builds as it matures.



Gardening in Maine

My peonies outdid themselves this past season, beginning to bloom in late May, building in numbers through June (as they reached their peak about the 20th), and then gradually diminishing Scout and Nova (herbaceous) were the two to lead off the season. The secret to the long blooming season is of course in planting a wide variety of different kinds of peonies—early, mid season and late. With about 75 different kinds and about 100 total plants, it make quite a spectacular show, and I enjoy every minute of it. Most people are surprised to find that I have such a beautiful peony garden, since I am just two blocks from the heart of downtown Bangor, and have a fairly small yard here in the city. The front of the house gives no real clue that the back-yard holds a spectacular treasure of beautiful peonies. Because we had no severe thunderstorms, heavy rains or high winds, all of the plants held their blooms well above the ground this year. My “Joseph Rock” tree peony planted just four years ago, is really flourishing and the flowers were beautiful and enduring. It looks better than some tree peonies I planted 15 years ago.

The real news is that a group of us have organized a peony group and have selected the name PEONY SOCIETY OF MAINE. At the moment there are twelve of us, all from the greater Bangor area. But it is our hope that we may be able to interest other peony enthusiasts from Main to join us. We have scheduled five meetings during 2001, with the majority of them around the peony blooming season. It's a great group and the fellowship is wonderful. One of our proposed projects is to have a peony garden tour of my own garden in June, ask for a small donation for admission, and use that money to expand the peony collection at the Littlefield Demonstration Gardens at the University of Maine in Orono. Any peony grower is Maine is invited to contact me for more information about our group or any of our activities.

—Ken Liberty, 23 Ohio Street, Bangor Maine 04401

Beauties in the World

Great variety in peonies is now available. So many lovely beauties as never before. At least one peony speaks to the Soul of each peony-lover. Many speak to me, but my favorite is a herbaceous variety, **Ludovica**. I like the large cup-shaped blossom, short plant, and luminescence of pink blossom, and dark green foliage. The immortal, Hermann Hesse, in his “Book of Fairytales,” speaks to the heart by flowers in his short story, “Iris.”

Many of the French, Chinese, Japanese, and American varieties now available to you, give you that come hither look from across your garden and across the many gardens of this world.

At my garden, Tomorrow's Treasures, I grow only varieties I love. **Coral Charm, Lotus Bloom, Nancy, Red Charm, Good Cheer, Feeree, Black Monarch, Flame of the Great Lady Liberty, Lovely Rose, Great Lady, Fire-light, Garden Treasure, Red Grace, Raspberry Charm**, and many others.

All speak to me. In world class tree peonies, alizarin, orange-red, sheaths of **Tessera** draw you nearer after the shiny color of a new copper penny has drawn you to where you can see the sheath. The lavender beauty of **Zepherus'** bloom and it's dark flares are large and of great splendor. The red and yellow colors of **Gauguin** contrast delightfully.

These varieties do and will endure in time just as art, literature, math, science, and poetry will. They become part of society, an dour personal lives.

Now **Niigata Otomenomai, Haruno-Akebono, Hanakisoi, Fen He, Hui He, Zi He, Flora, Ying Hong, Ba Bao Xiang, Kamata Fugi, Kamata Nishiki, Shimane Chojuraku, Lao Bong Hong, Chorjuraku, Nihonko, Kamikaze, Yi Yang Hong, Bai Bi Lan Duan, Yi Dui Xue, Fen Qiao, Hong Qiao, Zi Qiao, Mei Ren Mian, Guan Shi Mo Yu, Princess Saho, Spring Carnival, Guang Many Si She, Jiao Mei Yatsukajishi,**

Kokamon, Da Hui Die, Jitsugetsu-Nishiki, and Nissho stand as outstanding tree peony varieties. When the fanfare dies down, these will be standards, from the pure white to the gaudy that top their colors just.

Orange peonies are next, and even now, and variegated varieties of leaf. Oh, such varietal beauty from which we choose!

—Harold Entsminger, P.O. Box 275, Cut Bank, Montana 59427

Each issue of your periodical is well received. It gives me a great pleasure to read them, sharing the enthusiasm of the peony people. Thank you very much for the rich selection of articles, being informative and helpful for the garden activities.

Please accept my narrative of a surprising event I experienced in the summer of 2000.

My garden is located in the country of Østfold, Norway, ca 58 kilometers southeast of Oslo, the capital of our country. Surrounded by open farmlands and coniferous woods, the place features a landscape created by the late Weichselian delegation, and the human settlement dating more than 8000 years backwards. Here we find the qualities of a central location, and still, in a way, set apart from the “everyday bustle.” The area is in the climatic category H 5, belonging biogeographically to the boreonemoral zone of the palartic realm.

Being a collector of seeds and root cuttings of *paeonia*, I have through the years obtained a selection of varieties prospering in my garden. They belong to the herbaceous group of peonies. During almost five weeks in the summer their vigour and colours inspire powerful emotions in everybody being considerate of their beauty.

Early in June the last summer a strange event took place. On a rather bushy peony specimen, reaching a height up to 70 centimeters, five flowers developed. They were almost hidden by the foliage of the plant, and small, 7-10 centimeters in diameter. The flowers had yellow petals, numerous maroon-red stamens and three magenta red carpels. My curiosity was immense, had a tree peony turned out of the ground from forgotten seeds?

So far I designate my new peony companion *paeonia lutea* Delavay X Franchet. However, this identification needs a critical verification.

So far I am wishing for a gentle winter, making possible new exciting observations next summer. I look forward to the beautiful midsummer when twilight passes into dawn, creating the magic white nights of the north and intensifying the fascination of the peonies in all their glory.

—Olav M. Skulberg, Norway

Bill Seidl was kind enough to share a few of the seeds you sent him from a seedling of Ray Cobbs' *Paeonia* 'Aurelia' and one has germinated. This prompted me to look into the registration. I brought the following of Mr. Cobbs statements to Bill's attention; the flower is yellow with a red center that fades to yellow, the plant is said to be fertile, and its pollen parent is in question. Though it is possible that an unreduced gamete from the pod parent *P. mlokosewitschi* was fertilized by pollen of *P. peregrina* producing a fertile tetraploid, it is also possible that the plant was fertilized by a different species, perhaps *P. triternata* or *P. caucasica* producing a fertile diploid. If *P. peregrina* was not the pollen parent, Aurelia may not have the yellow flavone/red cyanadin combination that would offer possibilities of orange as Bill optimistically wrote in his article on breeding for orange printed in the March 2000 bulletin. Bill encouraged me to bring this to your attention so that misinformation is not inadvertently spread.

—Theresa A. Griesbach



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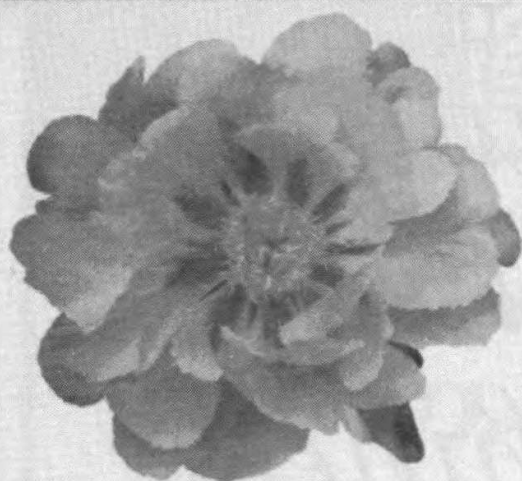
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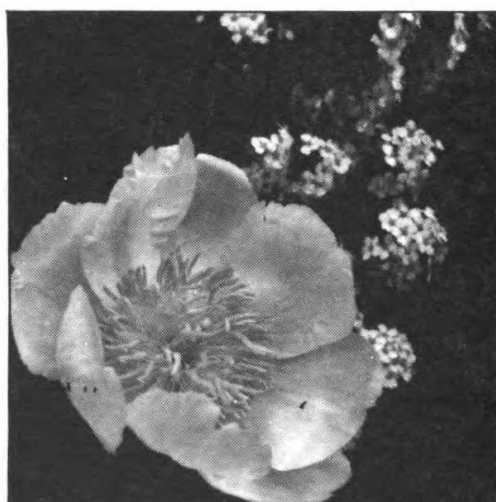
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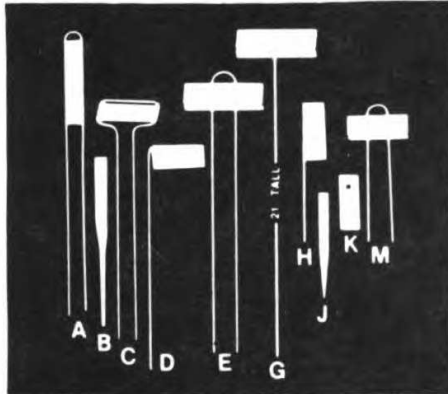
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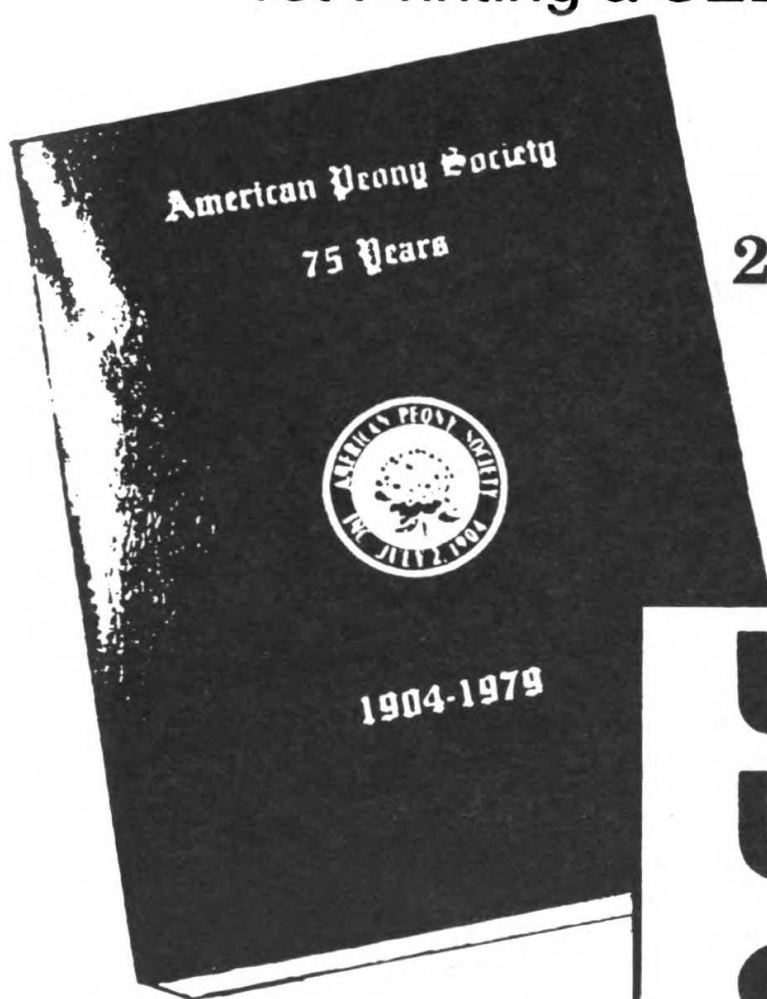
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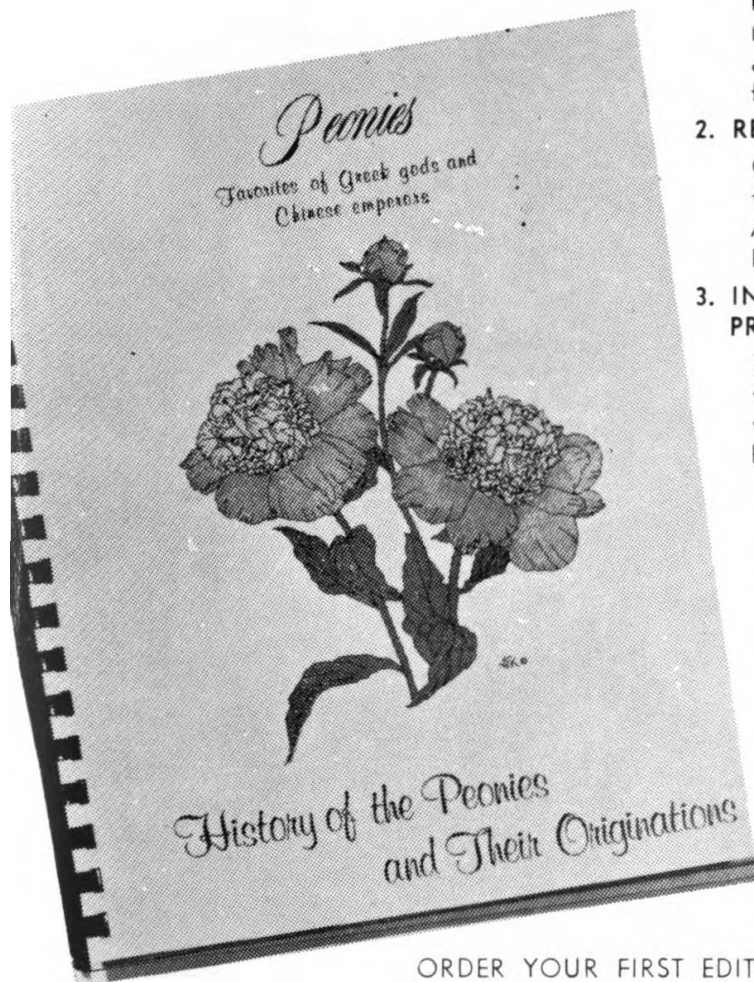
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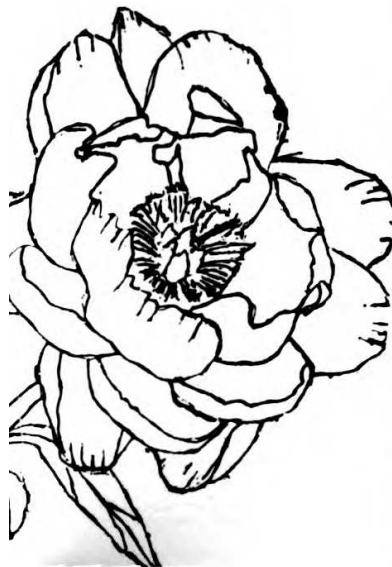
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