PAEONIA

Volume 23a, No.2 June 1992

Editors: Chris and Lois Laning
553 West F Avenue
Kalamazoo, MI.

Suggested yearly contribution:
$2.50 in the U.S.
$3.00 in Canada
$4.00 in Europe, New Zealand, and Australia.

OPTIMIST vs. PESSIMIST

An optimist takes the best apple out of the barrel and continues this to the end, finally throwing the last two away; always having the best.

A pessimist saves the best for the last only to find that the last is no good.

SEED DISTRIBUTION

This year my seeds will be listed by color rather than parentage. There will still be differentiation as to diploid and tetraploid. There will be some exceptions to this rule.

Seeds from our contributors will be listed as designated by the sender.

Guide to the
Nichols Arboretum Peony Garden

Located in Ann Arbor, Michigan, Nichols Arboretum of the University of Michigan is fortunate to possess a large garden of 786 peonies including about 230 cultivars. The Peony Garden dates to 1922, when the W. E. Upjohn family donated the original plants. Aubrey Tealdi, U of M Professor of Landscape Architecture and then Director of the Arboretum, laid out the plants in a formal arrangement of 27 beds, a design that has been maintained to the present. At its opening to the public in 1927, the Garden contained 280 different cultivars, and over the next 5 years, another 38 were added. Of these original 318 cultivars, 196 still remain, making the Arboretum a significant repository of old peony cultivars.

History of removals, additions, and maintenance in the Peony Garden between the years 1934, when Tealdi retired as Director, and 1970 is sketchy at best. During this period 41 cultivars were added, but 135 were removed or lost as maintenance declined until 1970 when the weeds that had overgrown the beds were removed. Since then, the Garden has been regularly tended and mulched with wood chips to enhance the appearance and keep the weeds at bay. Currently there are 224 verified and 10 unidentified cultivars that provide a spectacular show in June.

The Peony Garden is considered one of the Historical areas in Nichols Arboretum and the future management will reflect this. It is the primary goal of the Arboretum to restore any cultivar that previously existed here and remove all plants that cannot be identified

This guide presents a list of all the cultivars, followed by maps of the 27 beds with cultivar numbers corresponding to the names on the list. The bed numbers appear below each bed on the map, and refer to the numbered posts in each corner of every bed. The beds are numbered starting at the end nearest the Washington Heights gate and proceeding in a northeast direction. For more information concerning any aspect of the Nichols Arboretum, contact the School of Natural Resources, Dana Building 430 East University, Ann Arbor, MI 48109-1115.

1. Adelaide Hollis
2. Adolphe Rousseau
3. Albert Crousse
4. Albiflora the Bride
5. Alfred de Musset
6. Alsace-Lorraine
7. Andrew Muehlig
8. Anemonaeflora rubra
9. Archie Brand
10. Arlequin
11. Arturus
12. Asa Gray
13. Auguste Dessert
14. Augustin d'Hour
15. Aureolin
16. Aurore
17. Bayadere
18. Belisaire
19. Benjamin Franklin
20. Bertrade
21. Betty Blossom
22. Blanche Turner
23. Boule de Neige
24. Celestial
25. Charles McKellip
26. Clemenceau
27. Cherry Hill
28. Chestine Gowdy
29. Claire Dubois
30. Clairette
31. Claude Gellee
32. Constant Devred
33. Cornelia Shaylor
34. Coronation
35. Couronne d'Or
36. David Harum
37. Daybreak
38. Departing Sun
39. Due de Wellington
40. Duchess of Portland
41. Duchesse de Nemours
42. Duke of Devonshire
43. Edith Lyttleton
44. Edwin C. Shaw
45. Eileen Kelway
46. Elfin Pink
47. Eliza
48. Ella Christiansen
49. Ella Christine Kelway
50. Elwood Pleas
51. Entente Cordiale
52. Etta
53. Eugenie Verdier
54. Euphemia
55. Exquisite
56. Fanny Crosby
57. Faribault
58. Faustine
59. Felix Crousse
60. Ferdinand Stolizkca
61. Festiva
62. Festiva Maxima
63. Flag of War
64. Floral Treasure
65. Florence Nightingale
66. Frances Willard
67. Galathee
68. Geishe
69. Georgiana Shaylor
70. Gigantea
71. Gisele Perrette
72. Gloire de Touraine
73. Grace Loomis
74. Grandiflora nivea plena
75. Ginette
76. Grover Cleveland
77. H. F. Reddick
78. Hagen
79. Hansina Brand
80. Hazel Kinney
81. Helen Robertson

82. Helen Wolaver
83. Henry Avery
84. Henry M. Vories
85. Niscite Gawa
86. Innocence
87. Isoline
88. James Boyd
89. James R. Mann
90. Jeanne Gaudichau
91. Jeannot
92. John Richardson
93. Jubilee
94. Jules Calot
95. Karl Rosenfield
96. Katherine Havemeyer
97. Kelway's Queen
98. King of England
99. Krinkled White
100. L'Etincelante
101. La Fiancee (Lem.)
102. La France
103. La Perle
104. La Rosiere
105. La Tendresse
106. La Tulipe
107. Lady Alexandra Duff
108. Lady Emily
109. Lamartine
110. Le Cygne
111. Le Jour
112. Livingstone
113. Longfellow
114. Lora Dexheimer
115. Lord Kitchener
116. Louise Brand
117. Loveliness
118. Lucy E.Hollis
119. Luefta Pfeiffer
120. Mons. Depont
121. Mons. Martin Cahuzac
122. Madelon
123. Moon of Nippon
124. Marechal Vaillant
125. Margaret Atwood
126. Marguerite Gaudichau
127. Marguerite Gerard
128. Marie
129. Marie Crousse
130. Marie d'Hour
131. Marie Lemoine
132. Marquis C. Logergren
133. Martha Bulloch
134. Mary Brand
135. Mary Woodbury Shaylor
136. Maud L. Richardson
137. Meteor
138. Mignon
139. Mikado
140. Mildred May
141. Milton Hill
142. Miriam
143. Miss Salway
144. Mlle. Jeanne Riviere
145. Mme. Auguste Dessert
146. Mme. Benoit Riviere
147. Mme. Boulanger
148. Mme. Calot
149. Mme. Camille Bancel
150. Mme. de Verneville
151. Mme. Ducel
152. Mme. Emile Galle
153. Mme. Emile Lemonine
154. Mme. Forel
155. Mme. Gaudichau
156. Mme. Guyot
157. Mme. Joanne Sallier
158. Mme. Jules Dessert
159. Mme. Lemoinier
160. Mme. Savreau
161. Mons. Jules Elie
162. Moses Hull
163. Mr. G.F. Hemerik
164. Mr. Thim
165. Mrs. A. M. Brand
166. Mrs. C.S. Minot
167. Mrs. F.D. Roosevelt
168. Mrs. John M. Kleitsch
169. Myrtle Gentry
170. Nanette
171. Nick Shaylor
172. Nippon Brilliant
173. Nymphaea
174. Octavie Demay
175. Opal
176. Pallas
177. Paradise
178. Pasteur
179. Petite Renee
180. Philomele
181. Pico
182. Pride of Essex
183. Primevere
184. Princess Irene
185. Queen of the Belgians
186. Whitfield
187. Rachel (Terry)
188. Rei-Kai-Zan
189. Reine Hortense
190. Richard Carvel
191. Grandiflora (Richardson)
192. Richardson's Perfection
193. Rinhosen
194. Rose Shaylor
195. Rosette
196. Rosy Dawn
197. Rubra Superba
198. Ruth Brand
199. Sarah Bernhardt
200. Sarah Carstenson
201. Sarah K. Thurlow
202. Secretary Fewkes
203. Simonne Chevalier
204. Solange
205. Souvenir de Louis Bigot
206. Splendida
207. Standard Bearer
208. Summer Day
209. Suzette
210. Sylviane
211. The Moon
212. Therese
213. Tokio
214. Tourangelle
215. Triomphe de L'Exposition de Lille
216. Umbellata rosea
217. Unidentified
218. Victorie Chateau Thierry
219. Walter Morgan
220. Welcome Guest
221. White Lady
222. Will McClelland
223. Winifred Domme
224. Winnikenni
225. Yeso

DWARFISM

The present antique peonies are to be dug and divided, the surplus to be sold and the main supply will be replanted in new beds. While this would seem to be a wonderful source for old treasures, I feel it is not wise to acquire any of them for the following reason:

There is a disease (or maybe an ailment) caused by an unknown source that causes dwarfism or stunting. This problem is progressive in character ?beginning with short stems in part of the plant and resulting finally with the whole plant becoming so short that there may be as many as 400 little stems, no branching, and no flowers. It seems to live forever in this condition. Upon digging up the clone, there seems to be no evidence of root deterioration, no dead tissue, and no disease, but upon trying to propagate and looking for small measure of recovery, I have replanted divided portions, fertilized and did all I could think of to get it to recover — results, death. Maybe digging up and destroying it is the proper thing to do since the malady is progressive — from plant to plant, devastating small areas of the peony patch. This was (and is) evident at the Nichols Arboretum of the University of Michigan, Ann Arbor, Michigan. It would be a happy day if a University professor in Pathology would work on this problem and report his findings to the American Peony Society.

But why get excited about this unhappy situation? Just this, I am working to develop a race of peonies six inches high with small flowers and having stoloniferous properties, a thicket suitable for ground cover!! Liz Elling, Nichols Arboretum Assistant, promised to try to send me seeds from plants that have still the power to flower since they are only in, the first stages of this dwarfism. It may be that the seeds from these nursing home prospects may be unaffected or maybe affected in an intermediate condition. The seeds will be planted in my "intensive care unit" so that we may yet learn if there are to be any benefits resulting from this investigation.

Some diseases affect a plant genetically, causing unsuspected results, not all of which are unwelcome. Do any of you hybridizers have any thought on this matter?

- Chris Laning

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MEMOS FROM ROY PEHRSON (From PAEONIA, December, 1972)

When speaking with Dave Reath at the Minnesota Landscape Arboretum, I mentioned that I would return briefly to the showroom on my way home. He asked me to pick up his display bloom of Potannini "Tall Yellow" and send the petals to Fred Cooper and request that he analyze the color. He thinks that this plant could be a hybrid with lutea.

I did this. The bloom was so small that I also pulled out the tiny, partly formed petals from a couple of tight buds on this stem.

On reading Mr. Cooper's report I was led to wonder whether the enzymes which control the synthesis of the final chalkone color of the flower may do so in stages which include those other two chalkones he found. Then these intermediates could have been present only in those immature petals.

Here I must disclaim any knowledge in this field. Fred can squelch the idea without any wound to my ego.

p.s. There is one surest way of obtaining a hybrid of *P. californica*. Use the same method as was used in making '**Claire de Lune**' and the "Ito" hybrids. WORK!

Several writers on peony subjects have described a technique whereby it is possible to obtain seeds from varieties which are so completely double that no stamens or carpels are present in the blooms. In this method the emerging stems are cut off at ground level forcing the plant to send up stems from buds which would not otherwise have grown until the following year. These secondary stems may then produce blooms with stamens and carpels which may be used to produce seeds.

Some of you may be using this method to ensure a greater number of doubles among your seedlings. If so, there is a plant which may interest you.

Several years ago Brand's Peony Farm introduced a large full double red lacti of unusual habit; naming it '**Wilford Johnson**' for an employee. The stems are both short and sturdy and of uniform height. This causes it to present a flat "table top" of solid color. This must surely be the best dwarf or semi-dwarf lacti. It would be superb except the color is not outstanding and because the foliage becomes very shabby much too early.

It may be possible to self-pollenate this plant and so produce a strain of dwarf lactifloras of considerable merit. These could then be used in hybridizing experiments too.

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ED. NOTE:

> There is a progression of changes in the color of a flower. Ageing and fading must be recognized when describing the flower. Will keeping a developing bud in the dark present a light color? No, I covered three Red Charm buds with aluminum foil excluding all light, but when expanded buds were inspected these three were identical to others on the bush. Next I shall try digging up the whole plant forcing it in the dark early in the season.
>
> Two lilac clones were produced by forcing — Primrose and Sensation believed to be sectorial chimeras. We don't have a lot of information on peony forcing so if any of you have tried, we would like to hear results, also your methods!

GALEN BURRELL

March 4, 1992

Chris and Lois Laning
553 West F Avenue
Kalamazoo, MI 49004

Dear Mr. and Mrs. Laning,

I have just received a copy of PAEONIA from Al Rogers and have enclosed $2.50 for a first year contribution.

I was educated as a botanist/biologist but am now a nature photographer.

My hope is to one day have a nursery which grows primarily species peonies and irises. I now grow 4 species peonies and 50 species irises. This year I have received seed of 12 peony species and 25 iris species from all over the world. Hopefully some of it is as named.

I have no interest in hybridization - I just have interests in hand pollination so that I can get true seed from my species and how best to raise some of these species from people who have had experience. Although, the genetics is pretty interesting.

As for your pink tenuifolia it was probably a genetic variant (mutant) that someone collected in the wild and has since been propagated by division. I would be extremely surprised if you ever got a pink-flowered one from seed. You have just as good of a chance in getting a pink-flowered one from a red-flowered plant.

Thank you very much!

Sincerely,

Galen Burrell

P.O. Box 754
Ridgefield, Washington 98642

The Peony Gardens,
Lake Hayes,
Queenstown.
7th May,1992.

Dear Chris,

I must apologise for not having contacted you before this, but your Bulletin arrived at a particularly busy time in our household, we have just completed the lifting and packing of our peonies for the season. This year we had two women helping us, which was a great help, and that part was completed in a month. However, the rest of the procedure has now been completed, the replanting, cutting back of foliage, stock taking etc. It is good to be finished. Combined with all of this, my elderly Mother was quite ill, and passed away at Easter, so we have not had much time to think of anything else. So now we are looking forward to a holiday in Europe, and hope to be in France in time for the peony season, and visit a nursery or two there, and also spend some time at Floriade in Holland. Then on down through Italy, Greece and Turkey. No America this time, I'm afraid.

I thought I had paid our subscription to you, and will get it fixed up, and sent to you with this letter.

We had a most exciting time with seed of a '**Sunny Boy**' cross from Bill Seidl, planted 1988, and flowering for the first time in spring 1992. We culled a few on the first flowering as they were quite poor colours, but have been thrilled with some of them. I sent some photos to Greta K., so you may get to see them at the Convention. One is really a strong lemon (as lemon as a lutea ludlowii flower, and appears to be the same form, as near as I can judge from a photo) of '**Lemon Chiffon**'. It is much stronger in colour than '**Sunny Boy**' which was flowering at the same time. It is most frustrating not ever being able to see the American and New Zealand flowers fresh at the same time. Our '**Sunny Boy**' is near enough to the same colour as '**Prairie Moon**', and '**Claire de Lune**'. Of course, a good deal depends on soil and climatic conditions. We find colours, particularly the bright pinks of '**Cytherea**', '**Paula Fay**', '**Sophie**', etc. fade fairly quickly with us. However, there are three other seedlings from the '**Sunny Boy**', that are also promising - one is fully double like '**Sunny Boy**', but has pale pink guard petals, and another is a clear lemon with two rows of petals, and is a lovely goblet shape. However, the next few years will tell if they are really any good or not - we have only one plant of each, so anything could happen. But we do hope to be able to propagate from them, and eventually find names for them if they measure up.

We have had some quite interesting flowers, both herbaceous and tree - from seed that we have had from you and the seed pool - and are now in the process of culling and trialing. Leads to some good discussions down in the seedling patch every day, I can assure you!
We wish you all a successful convention this year - we would like to be there again, but just can't manage it this time.

Kind regards,

Dorothy Hamilton

GULDSMEDSGÅRDENS PLANTSKOLA

TELEFON 0513/50040 HERMANN KRUPKE POSTGIRO 52 12 38

L J U N G den 12.11.1991

Chris & Lois Laning
553 West F Avenue
Kalamazoo, MI 49007 U S A

Dear Friends,

Thank you for Paeonia coming punctually fourth a year with interesting reading and reports.

It's easy to read and understand for me now, but writing an answer is still much more difficult.

Many of my seedplants are growing well and will be selected in time. Lighter forms with pink, and some yellows do make seeds easily. It is much more difficult to get some seeds from the reds. So far I got almost "somewhere." — Oh yes, a lobata — seedling pollinated with 'Coral Charm' made seeds 1985. I got four healthy plants. Flowers are red but have not made any seeds so far. Crossing Tenuifolia rubra plena x Veitchii resulted in good, healthy plants. Almost all of them inherited veitchii- leafs. Four flowers appeared this summer dark-carmine and nodding like pollen parent. - Exciting!

Otherwise there is a great deal to be desired in matter of hybridizing. Most varieties grow and bloom well far north in Scandinavia, but much harder is it to obtain seeds. The most desired crosses I move into greenhouses.

Primary there is much fun and joy in this inspiring work and maybe sometime one achieve a little contribution for this subject. Possibilities are legion.

Hereby sending my payment for the next year. Concerning seed-offers: I am interested of red hybrids as Dad, America and Burma Midnight F2. Looking forward for the next number of PAEONIA.

With best wishes for coming holidays.

Hermann Krupke

LETTER FROM: Marion W. McFarlane
F/1 324, Wai-iti Rd.
Timaru, S. Canterbury, New Zealand April 21, 1992

Dear Mrs. Lois and Mr. Chris Laning,

My intentions have been better than my actions as far as sending you a letter and my subscription which I must owe to you and am overdue I'm sure — better late than never. It always pleases me when I see that envelope in the post from far away Kalamazoo — I often think back to about 10 or 11 years ago when I received a generous packet of T.P. seeds — what excitement, and some of those seedlings have flowered from about 3 years ago and have been sold to private gardeners around Christchurch, and elsewhere. Just seedlings, unnamed, but there were some beautiful colours shades. Our son and his wife are the growers and they had the plants all in buckets, flowering. One plant in particular was outstanding — a semi-D. The petals were a lolly pink for half of their length and then an outside 2" band of wine to light maroon banded the edge. It was striking.

They (the peony group) had a bay at a 3 day Floral Display up in Christchurch, and those interested just couldn't resist buying. Our daughter-in-law even had orders for grafted plants that she had done and planted this autumn and even to 4 and 5 yrs. ahead for grafted '**Zepherus**'. She has recently purchased a guillotine machine for cutting the grafts and that makes it a much easier task and a better percentage of takes after 2 yrs. in the ground. John and Dorothy have taken up peony growing as a retirement hobby. She seems to have what it takes to know when to spray and do the right things for good growth. Years ago (10-12 perhaps) we imported plants from Klehm's Nurseries in Barrington Hts., Illinois, and they are her stock plants for the grafts. I am enjoying seeing the progress going on. In a couple of months I shall be 83 yrs. of age — but still agile, thank goodness. I experienced a very sad part of my life last December. After 56 yrs. of married life together my husband passed away — he had failing health for some years — he was 86, but I never thought of him as at that age. But that is life and we have to accept it, in time, difficult as it may be.

I expect you will be watching your peony buds coming along to flowering in a couple of months maybe. I haven't noticed very much on T.P.'s in your Paeonia for some time; is it just that folks haven't sent in news — seems more on herbaceous P. and I find that I'm really past being interested in the pollinating etc. of these very showy garden plants. Would you mind taking my name off your mailing list when my sub. runs out, thank you. Maybe it has run out now?? (*Ed.: No, it's paid thru 1995*.)

As you will notice, the N.Z. growers are known as a Peony Group (not a Society); something to do with rules I think, and all the registered members live in the South Island of N.Z., strange to say. It's colder of course and they (the plants) thrive — very different from warm, humid Auckland way up north. I shall close my note and hope this scrawl of nearly illegible writing does not test your eyesight too much. Thanking you again and wishing you both good rewards in your peony work over many years I expect.

Yours sincerely, Marion W. McFarlane

The following article is from the Society for Louisiana Irises
-Courtesy of John Randall, Creston, IA

II. Using Herbicide Treatments to Induce Tetraploidy in Louisiana Irises and Comments on Existing Cultivars

By Kevin C. Vaughn, PhD

ABSTRACT: The herbicides trifluralin (TREFLAN) and oryzalin (SURFLAN) were selected as chemical compounds likely to increase ploidy levels in Louisiana irises. The compounds, while not as toxic to animals, affect the development of plant tubulin protein in the same way as colchicine. Two batches of seedlings in two years have received the treatments. The first group (with some seedlings set aside as a control) was treated for 4-24 hours with herbicide solutions of 2-10 ppm. Seedlings were then thoroughly rinsed and planted into a sterile, soilless mix. Club-shaped swelling was noted on the roots, and the treated seedlings showed stomate size approximately 50 percent larger than the control group. Of 12 treated seedlings, one appears to be a sectorial chimera, but 11 appear to be tetraploids. All but one of the seedlings in this group should bloom during Spring 1992. A second group of seedlings from diploid crosses was treated this year, and the same high conversion rate was noted. Attempts to produce tetraploids by tetraploid X tetraploid crosses, however, has proved disappointing. The article concludes with comments on existing tetraploid cultivars.

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EXCERPTS FROM MIDWEST PEONY ROBIN No. 1, February, 1972

Seed Germination: I will mention only that I am becoming more certain that some peony seeds have a requirement to be held fairly long at high temperature before the root will be released to grow. Yet, once this period has been accomplished the root will still not grow until given a certain lower temperature, usually in the rage of 60-70 degrees or lower. The root growth temperature occurs out of doors in the soil about the end of summer. These two temperature factors, if they are genuine, argue for planting of held-over seeds by late spring. Also, seeds to be germinated indoors might best be given several weeks (I am now using 8 to 10 weeks) at 75 degrees or above before reducing the temperature for root growth to commence. This latter fits very well with Roy's plan to have roots emerging in late November or early December.

Secondary Bloom Stems to Improve Seed Production of Doubles: Established plants of '**Karl Rosenfield**' and a bomb double seedling responded well to decapitation by giving blooms with good carpels and, eventually, seeded well. '**President Taft**' and several full doubles did not. The semi-double '**Miss America**' gives secondary stems right along with the primary stems and it is the flowers on the former that usually have carpels which will function normally. This is a characteristic that might well be concentrated in a breeding program. The secondary stems tend to extend the flowering period of this variety.

Pollen Parents: '**Good Cheer**' (P. offincinalis alba plena X p. lobata of Perry) gave a better seed yield on everything tried, lactiflora or hybrid, than any other hybrid or species pollen used. Also, the seeds germinated in a shorter time than did those from the same pod by a different pollen. '**Alice Harding**', lutea hybrid, gave almost no pollen for me, too. A friend had a small amount, and I have some left from the previous year, both of which may have given a few seeds. I have a notion that there are a lot of lutea hybrids that are potentially more useful as pollen parents.

- Don Hollingsworth