

the Siberian

IRIS

vol. 6 no. 1
Spring 1985



1984 MORGAN AWARD WINNER - PINK HAZE

The
Society
for Siberian
Irises
Celebrating its
25th
Anniversary
25 year
1960-1985

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Want to be useful?

Write the Chairman of the committee of your choice!

THE PRESIDENT'S LETTER

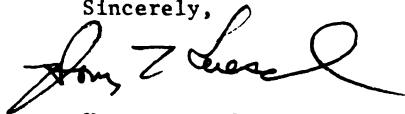
Welcome to the twenty-fifth anniversary of the Siberian Iris Society. As they say in those commercials, "We've come a long way, baby." Since the great Swedish botanist, Linnaeus, first described I. Siberica in 1753, nine more Siberian species have been discovered and we now have more than a thousand cultivars. Frances Cleveland and Charles Gersdorff each named and introduced more than 40 different varieties in the twenties and thirties, and Amos Perry over on the other side of the Atlantic (Peg calls this a Duck Pond, and well it may appear to our Astronauts in outer space), created almost as many. Now Currier McEwen has named and introduced more than sixty. I have no doubt that there will be many more to come. And as Ben Hager said at the annual meeting in Seattle last year, "We are just on the threshold of some exciting new colors too."

Our annual meeting will be held during the AIS Convention at Indianapolis this year. The dates for the convention will be May 19 to 23 and our meeting will be on the first day. We sure hope you can make it. If you are driving, we recommend that you try to stop and visit Prof. R. W. Hollingworth's garden on the way home. He lives in West Lafayette, Indiana, which is only a couple of hours away from the convention site. The Convention gardens have Siberian guests from Louise Bellagamba, Dot Hujsak, Dale Johnson Harley Briscoe, Calvin Helsley, Anna Mae Miller, Bob Hollingworth, James Ennenga, Currier McEwen, Bill McGarvey, Donald Saxton, Steve Varner and Julius Wadekamper, and they are planted in seven different gardens, so we can look forward to some good Siberian blooms.

Peg Edwards may have retired as our editor, but she has been working ever since collecting articles and editing them for the AIS Summer Issue of the Bulletin, and Carolee Clay is taking over this publication. I hope you enjoy the new format.

Jim Foreman is also hard at work on the exciting new Siberian Checklist which we hope will be completed for the 1986 convention. It is worldwide in scope and the largest compendium of facts and figures on Siberians and their hybridizers, ever assembled. Yes, my friends, we have really entered the computer age. . . .

Sincerely,



Harry Kuesel

1985 TREASURER'S REPORT TO MARCH 1, 1985

Gunther Stark

On hand, checking account.....\$ 981.03

Income

Dues income	\$ 1547.00
Book sales	888.00
Miscellaneous income	21.00
Interest income	331.41
Eastern auction (net)	<u>1961.50</u>

Total income.....\$4748.91

\$5729.94

Expenses

Printing	\$ 641.39
Postage (all)	425.53
Typing	76.00
Mailing permit	40.00
Deposit box rent	5.00
Pay off loan	2500.00
President's expenses	16.65
Brochures	<u>49.42</u>

Total expenses.....\$3753.99

On hand (checking account).....\$1975.95

On hand (certificate of deposit).....\$4000.00

Publications

Back issues: All back issues will be \$1.50 each if available. Some of the early issues are no longer available. The Check List is \$2.75; Judging Standards, \$1.00 while they last. Checks for all publications, payable to the Society for Siberian Irises, should accompany all orders. Send to the Publication Office, Mrs. Ruth Wilder, 2219 Mathews SE, Huntsville, AL 35801, except for SIBERIAN IRISES, by Currier McEwen, which should be ordered from Mr. Julius Wadekemper, 10078 154th Avenue, Elk River, MN 55330. Price for this, by mail, is \$7.00 including postage and handling.

THE SIBERIAN IRIS

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The Siberian Iris is published semi-annually by the Society for Siberian Irises. Editorial Office is at P.O. Box 398, Wayland Academy, Beaver Dam, WI 53916. Deadlines are February 15 and September 15; earlier receipt of material is desirable. Black-and-white photographs and drawings are welcome; please put return address on the back if they are to be returned. Reprinting is by permission of the writer and the editor, with due acknowledgement.

The date on the right of your address label is the expiration date of your membership. If you have recently paid your dues, ignore it. There is inevitably a gap in the passing along of this information.

Dues are: Single Annual, \$2.50; Family Annual, \$3.00; Single Triennial, \$6.50; Family Triennial, \$7.50. Write the Treasurer about Life Membership. Membership is open to all AIS members in Canada and the United States, and to all iris fanciers elsewhere.

A Hasty History of Hybrids of Siberian Iris Species

Jean Witt

Helping to proof the species aspects of the forthcoming revised edition of the Siberian Iris Checklist has been an interesting experience. While it provided me with perhaps the best overview of the development of garden Siberians that I have ever had, it also left me with the distinct impression that we are not taking advantage of all our opportunities. Despite the high level of quality in our current introductions, too many of us are headed in the same direction--we need to diversify our efforts. I suggest that it is time to take another look at our species and near-species selections, and especially at within-series and inter-series hybrids, to find additional directions that our breeding programs might profitably take for the future.

The first Siberian irises for the garden came from the 28 chromosome species, beginning with *I. sibirica* itself. Few named varieties are listed as collected, but considerable variation was recorded early on. SIBIRICA ALBA, illustrated in Curtis' Botanical Magazine as early as 1809, was still listed by Wallace as late as 1934. There were also SIBIRICA ANGUSTIFOLIA (no date), a blue dwarf; SIBIRICA ATROPURPUREA (Van Houtte 1876), dark reddish blue still listed by Barr in 1939; SIBIRICA CRISTATA (Vilmorin 1932) whose name implies that it may have been "crested" in some manner; SIBIRICA FLORE PLENO, a blue double described in 1839, still listed by Farr in 1912; AIBIRICA MAXIMA, McCoun 1927, which appears in parentages of later varieties. Later additions were SIBIRICA NANA (Perry 1940), and SIBIRICA NANA ALBA (Perry 1940). Striped and much branched GRANDIS (Farr 1912) might also be included here.

The record of acquisition is clearer for *I. sanguinea*, where a number of varieties are listed as collected. These include ACUTA (Willdenow 1813); BLUE KING (coll., Barr 1902 Japan); COREANA (Leichtlin 1886, Manchuria); EMPEROR (coll. by Barr, introduced by Wallace in 1914); SNOW QUEEN (coll., Barr 1900 Japan) and still around; HAEMATIPHYLLA (Fischer 1825), still offered by Bonnewitz 1920. NIGRESCENS (Van Houtte 1875), is behind Caesar, and is also still around. (THIBET, coll. by Farrer, may belong here or with the 40's). Hybrids between variants of the two species gave rise to the garden Siberians of today, but the exact origin of many of the earlier varieties is not known.

In addition to the "historical" varieties of long standing, we have a few more recent items. Several *I. sanguinea* forms were listed by the Japanese nurseryman Wada in the late 1930's, again

A Hasty History of Hybrids, Continued

including doubles; it is not known whether these were imported into America at that time. A tall deep violet-flowered plant, which I have listed as KAMAYAMA, was sent to me from Japan in the 1960's, along with a small white-flowered plant with almost linear falls which came as KOBANA. Joan Cooper lists SUJI IRI, a white with blue veins. CAESAR's GHOST is a near-wild form of I. sibirica. I am also currently growing three blue-flowered plants from Korea, each different. Eckard Berlin has something he calls "USO" Unidentified Siberian Object, which came to him from the USSR. Doubtlessly there are other "modern" species acquisitions in the hands of Siberian breeders.

The 40 chromosome species of the subseries Chrysographes arrived on the scene in the early 1900's. They include the striking red-violet I. chrysographes, bright blue to violet I. clarkel, deep violet I. delavayi and I. dykesii, yellow I. forrestii and I. wilsonii, mottled I. bulleyana; and blue-violet I. phragmitetorum which is not in cultivation. Hybridizing within this group began almost immediately--they are conspicuously interfertile in the garden; and I. bulleyana may even be a hybrid from the wild. The color range of seedlings quickly expanded to include browns, and many spotted and striped plicata-like patterns, as well as whites, and yellow amoenas. These 40 chromosome species are considered somewhat more difficult to grow than the 28 chromosome group, but the class has expanded steadily, though not all registrations have made it into commerce.

The rather considerable difference in their chromosome numbers has not been a deterrent to hybridization between the two groups. Named varieties of record include the following:

AEGAEA (Spender 1943) dark blue, (Emperor x sdlg.) x chrysographes
COOKLEY BLUE (Christie 1939) dark blue, (chrysographes x sibirica)
FORETELL (McCarvey 1969) lt. blue/yellow, forrestii x (WHITE SWIRL
x (GATINEAU x CAESAR's BROTHER).
MOONSCAPE (Kitton 1965) blue-gray on a yellow base;
inter-subseries
ROB (Hansford 1975) purple, sibirica/bulleyana hybrid
RED EMPEROR (Sturtevant 1924) purple, allegedly part chrysographes
TWO WORLDS (Tamberg 1981) white tinged violet (BERLINER REISEN x
LIMEHEART)
VIOLET WAVE (Spender 1943) dark blue (EMPEROR x sdlg.) x
chrysographes sdlg.)

Obviously, the possibilities for this type of cross have barely been tapped--surely more crosses between 28's and 40's will be worth our time and trouble.

In the final hybrid category are the inter-series crosses--hybrids between the various species of Series Sibiricae and the species of other beardless iris series. The first named varieties of this type were introduced by Perry in the 1920's, and we also

A Hasty History of Hybrids, Continued

have several modern varieties, such as GERALD DARBY (Darby 1968) blue-purple ((*sanguinea*, as *orientalis*) x probably two Louisiana hybrids); HOLDEN CLOUGH (Patton 1971) brown, (*chrysographes* x *pseudocorus*) and STILLES WASSER (Berlin 1979), light blue, (*sibirica* sdlg. x probably *I. setosa*). It seems likely that most of the rather extensive list of inter-series hybrids in GARDEN IRISES (except for the Cal-Sibes) are not represented by living plants in America at the present time. Here is a wide open field for the experimentally minded! This is the list of reported crosses:

chrysographes x *grantduffii*
(*CHRYSOGOR* x *hartwegii*) x (*PARISHII* [CA] x *fulva*)
delavayi x *fulva*
delavayi x *laevigata*
delavayi x *milesii*
forrestii x *fulva*
forrestii x *setosa*
forrestii x *longipetala*
longipetala x *sibirica*
milesii x *forrestii*
sanguinea x *setosa*; *setosa* x *sanguinea*
pseudacorus x SNOW QUEEN
RED EMPEROR x *pseudacorus*
sibirica x *fulva*
sibirica x *setosa*
sibirica x *versicolor*
sibirica x *virginica*
sibirica x *wilsonii*
SNOW QUEEN x *longipetala*
spuria x *sanguinea*
spuria x *SIBIRICA BAXTERI*
versicolor x SNOW QUEEN
virginica x *sanguinea*
wilsonii x *fulva*

This does not include the Cal-Sibe hybrids (*Californicae*/-*Sibiricae*) which have been successful with both 28 and 40 chromosome Siberians. They are the only ones I can speak about from personal experience. Some combinations give very good garden plants indeed; others are less satisfactory. STILLES WASSER exhibits hybrid vigor as well as attractive flowers; my seedlings from CAMBRIDGE x *setosa* are also very promising, with ruffled form and good branching. Crosses of Siberians with modern named varieties of Louisianas and Spurias will surely be worth a try. What tetraploidy might do for some of these hybrid combinations remains to be seen.

There have even been a couple of registrations of hybrids between Siberians and tall bearded, such as AMAZEMENT (Wiswell

1972) pale yellow (ELSA SASS x WHITE EMPRESS). Being a bit of a skeptic, I'd like to see a few of this type run again, to be sure they are for real. In any event, Siberians surely qualify as giving the greatest hybrid diversity of any group of irises. We are a long way from knowing what their limits really are. Let's get going!!!

NEW SIBERIAN IRIS CHECKLIST

The new comprehensive Siberian Iris Checklist is being held up for publication and release in 1986 due to what was felt to be important additions, corrections, changes and further research in the History and Biography areas.

"SOME UNUSUAL SEEDLINGS AT ILLINI IRIS GARDENS"

Steve Varner

In hybridizing, one often sees novel and different forms and color combinations. They are interesting, and if the trait is desirable, crosses can be made in an attempt to concentrate the genes. I do not believe an iris should be introduced just because it is different. It should be harmoniously proportioned and distinctly beautiful.

I have an interest in median heights in breeding Peonies and Siberian iris. The term "dwarf" is often used, probably incorrectly. Such plants must be in proportion in all parts--not just short. Last year I bloomed #4165 from Illini Charm breeding. At 18", the flower size, leaves and stem matched. Its blending of lilac, lavender, blue and white was pleasingly beautiful, in wide rounded form. Seedlings from "Rare Jewel" and "Illini Charm" tend to have dainty, graceful flowers. The term 'Sunburst pattern' has been used by some to describe radiating veins, usually of self color, on a white or cream signal area. These are especially pleasing in mid blues and grape reds. Artful combinations of white background on the upper portions of the falls with precise dark veins of the overall color of the flower are also attractive to some.

One deep red grape seedling with flat umbrella form is unique, with creamy white signal areas on the falls and long narrow creamy white blazes showing on the inside of the standards, giving a fireworks display effect.

Contrasting colors and unusual forms of styles add variety to many seedlings. Well 'branded' Siberians continue to be scarce. Tetraploid pink amoenas and derivatives are coming from "Dance Ballerina Dance" and its sib "Illini Flirt."

Dappled blooms in various colors and wire edged rims are the ones that continue to intrigue me. Visit your local Siberian hybridizer and see how you like some of these combinations.

New England Apogon Auction

Marian Schmuhl

"The best yet!" was the consensus of opinion of the 1984 New England Apogon Auction, run by Marty Schafer and Jan Sacks. All it required was a lot of thoughtful planning ahead and a lot of hard work. The result was a program and auction that was informative, well organized, financially successful, and a great deal of fun for everyone.

In the morning Sarah Tiffney presented a slide program on apogon species, followed by brief slide presentations by N.E. hybridizers Bee Warburton, Currier McEwen and Ken Waite on their recent introductions that would be up for bids in the afternoon. The program was fascinating and informative for everyone. The proof of its success came during the auction, when species went for higher prices than ever before. Following the program the bargain tables were opened and quickly depleted. After the sumptuous buffet lunch, the auction itself was smoothly handled by Walter Kotyk, auctioneer, with Bobbi Whitehouse and Janet Merrill as clerks. The highest price realized at this auction was \$29 for Ken Waite's HARBOR MIST.

Over 50 people in all came for either the program, bargain table and/or auction, with 36 people taking numbers to participate in the auction. Of the net "take" of \$2792.50, \$509 went to the Society for Japanese Irises, \$292 to SIGNA (a first!), \$1955.50 to the Society for Siberian Irises, and \$36 to our new Louisiana Acquisition Fund.

Contributors of iris were numerous--Thanks to Sarah Tiffney, Harry Bishop, Bee Warburton, Currier McEwen, BarBara Schmieder, Marian Schmuhl, Joan Dillard, Bob Sobek and Ken Waite for their generous donations. In addition we had contributions from "out-of-towners" and they deserve a special thanks--Adolph Vogt, Mrs. A. H. Hazzard and Dot Rogers sent Japanese; Ginny Burton sent species; and Alice Kelly of Denver, Colorado sent us her entire collection of Siberians since she couldn't take them with her in her move to San Diego.

THIS YEAR'S NORTHEAST APOGON AUCTION TO BE HELD AUGUST 18, 1985

Once again iris donations are requested from around the country. Please write to Marty Schafer, 45 Elm St., Bedford, MA 01730, if you are able to contribute or want to attend. He will give you all the details. If possible, we would like slides of contributions. They will be well cared for and returned.

THE SIBERIAN SPECIES

Harry B. Kuesel

Have you ever wondered how far back the Siberian species were discovered? Do they go back to biblical times? Perhaps not. . . . But the first record of *I. siberica* that we have is reported by Linnaeus (Carl von Linne), the famous Swedish botanist who is often considered the father of modern botany. In 1753 he published a book--"Species Plantarum" and it is here that *I. siberica* was first described. A blue self found in both Central Europe and Russia, but not Siberia. Maybe it was too cold to go there to find it in those times. This species had 28 chromosomes. The only other species with 28 chromosomes was *I. orientalis*, now called *I. sanguinea*. This is another blue self but has only two buds per stem and was reported by Thunberg. It was found in Manchuria, Korea and Japan, in 1794.

Discovery of the 40 chromosome siberians came about a century later. Botanical author Marc Micheli (1844-1902), described *I. delavayi* as a blue self collected in Southwest China in 1895. *I. clarkei*, a closely related species was found by Baker in the Sikkim province of India. That's up in the eastern Himalayas. You know, where Mt. Everest is and K-2 and those places they are always trying to climb in the ice and snow. The famous plant explorer E. H. Wilson found *I. chrysographes* in China at the beginning of this century--actually 1908. This is a shorter dark plush blue self, very dark. The dark red form of *I. chrysographes*, *rubella* was found by K. Ward in West China in 1921. C. H. Wright found the yellow species--*I. wilsonii* in the West Hupeh and Shensi provinces of China in 1907. Then W. R. Dykes became curious and went exploring in West China and the Northwest Yunnan Province in 1910 and found *I. forestii*. This is a light yellow self. He also brought back *I. bulleyana*--a stippled blue bitone with a hollow stem but its status as a true species is still being challenged by some botanists. *I. dykesii*--a red bitone species was reported by Dr. Otto Stapf (1857-1933) of the Royal Botanical Gardens, Kew England, in China in 1933.

Amos Perry over in England began crossing these species, especially the 40 chromosome ones and also crossed them with Pacific Coast natives. He named the best ones *chrysofor*, *chrysofoug*, *chrysoibirica*, and *bulleygraphes*. Pretty soon Englishmen and Americans on both sides of the Atlantic were creating cultivars with more buds, more branches, more colors, ad infinitum. . . .

From the Editor . . .

This has been a hectic issue as was to be expected. Getting information articles, etc. is a slow process. Then in the middle of the muddle it was learned that Peg Edwards had entered the hospital for an operation. Her husband has been filling in for her (she wrote in her last note), and she is home recovering. I am hoping for an article or two from Peg for our Fall Issue, "Get well soon, Peg."

There are a few things yet to work out--you will notice the different type sizes in the bulletin. If you have a size preference, drop me a line or two. There were other things I had wanted to try, but they will have to wait for another time.

You--the members growing and breeding siberians--are our best source of articles on what's happening with them. So why not write something for the Fall Bulletin? (The deadline is September 15.)

I hope many can make it to the Indy Convention. There should be an article or two there. Don't forget--we can always use good black and white photos or even good slides. The bulletin can only be as good as you the members make it.

Carolee

NO MORGAN AWARD FOR 1985

At their Seattle AIS Convention meeting last year, the Board of Directors of the American Iris Society approved a proposal by the Society for Siberian Irises to upgrade their top Award known as the MORGAN to Medal Status. Hereafter we will have the MORGAN-WOOD MEDAL, but this won't begin until 1986, because there are no Siberian irises which have won the AIS Award of Merit. The AIS Judges' Ballot which is being mailed to all qualified AIS Garden, Master, and Emeritus Judges this Spring will indicate the siberian irises which are eligible for the Award of Merit. Up to three can be awarded this year. Then in 1986 these irises plus the last six Morgan Award winners will be eligible for the Morgan-Wood Medal. The IRA WOOD MEDAL which is in stock at the Medallie Art Company in sufficient quantity to satisfy our needs till the end of this century will have the obverse side reprocessed with suitable wording to show the name of the iris and the name of the winning hybridizer.

YOUR GARDEN, A SIBERIAN IRIS DISPLAY GARDEN?

Donald Koza, Chairman

Do you have a portion of your Iris garden set aside just to show your friends and neighbors the specific beauty of the Siberian Irises? Then you should write me and ask to be designated as a Siberian Iris Display Garden. From then on it is all advantages to you. You'll receive the listing of all of the present Display Gardens with the names of the Siberian Irises in the gardens. The listing will tell you who has surplus irises that they would like to trade for other Siberian Irises. They will also list Siberians that they would sell at reduced prices to owners of other Siberian Display Gardens. Your Siberian Irises will be listed with the names of those that you wish to have in your garden. Soon you, too, will be listing your surplus Siberian irises that you would be happy to see displayed to the public.

For more information, write: Dr. Donald W. Koza
Display Gardens Chairman
1171 E. Idaho Avenue
St. Paul, MN 55106

You will receive a copy of the present display garden listing and information on how to list your Siberian Irises and your wants for more Siberian Irises for the Display Garden.

1985 LISTING OF SIBERIAN IRIS DISPLAY GARDENS

Dr. Donald W. Koza

(Note: The address shown here is not necessarily that of the actual planting; it is the home address of the gardener. It is advisable to phone or write to make sure the garden will be open at the time you expect to go there and also to get exact directions to the plantings.)

1. American Horticultural Society, Mr. Steven Davis, Mt. Vernon, VA 22121. 703-795-8882. May 25-June 10.
2. Mr. Charles Applegate, R. 2 Box 163, Perrysville, OH 44864. n/ph. May 28-June 7.
3. Bella Vista Garden--Mrs. Louise Bellagamba, 11431 Old St. Charles Rd., Bridgeton, MO 63044. 314-739-5413. May 20-June 15.
4. Mr. & Mrs. William Belus, 6401 Constance Ave., Bartlett, TN 38134. 901-388-2458. May 1-7.
5. Mr. & Mrs. Harley Briscoe, Tr. 1 Box 146, White Hall, IL 62092. 217-374-6654. May 15-30.
6. Miss Marie Caillet, Tr. 1 (Oak Point Area) Frisco, TX 75034. 214-292-1154. April 25-May 5.

Listing of Gardens, Continued

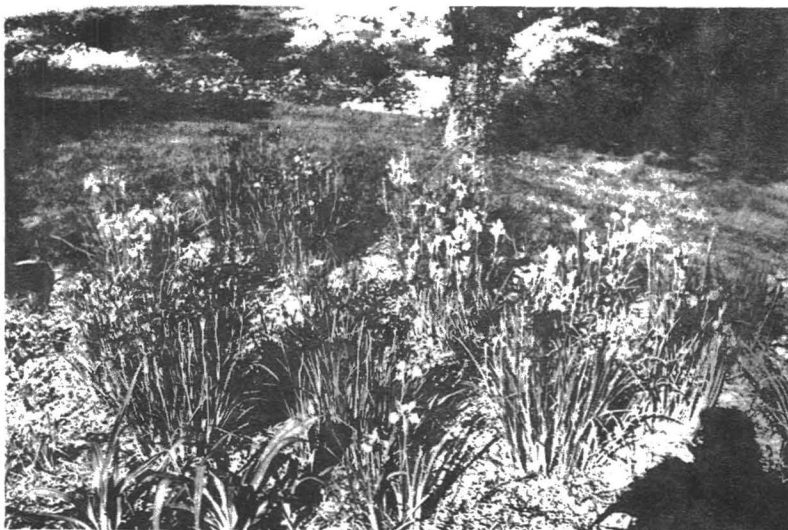
7. Mrs. Rena Crumpler, 2521 Wycliffe Ave. SW., Roanoke, VA 24014. n/ph. May 12-25.
8. Denver Botanic Garden, Mr. Harry Kuesel, 4 Larkdale Dr., Littleton, CO 80123. 303-795-9718. May 20-June 10.
9. Mr. & Mrs. James Ennenga, 1621 N. 85th St., Omaha, NE 68114. 402-391-6337. Late May to early June.
10. Mr. & Mrs. James Foreman, 1360 W. Michaels Rd., Tipp City, OH 45371. 512-667-2869. May-June 7.
11. Mrs. Kathleen Frey, 6275 Hawarden Dr., Riverside, CA 92506. 714-686-1848. Mid-April.
12. Mr. Larry Harder, Ponca, NE 68770. 402-755-2615. June 1-15.
13. Mrs. Phyllis Harrington, 3018 Dirr (P.O. Box 222) Parson, KS 67357. n/ph. May 5-20.
14. Mr. Robert H. Hollingworth, 1015 Windwood Lane, W. Lafayette, IN 47906. 317-463-9165. May 15-June 1.
15. Mrs. Karol Hujzak, 3227 S. Fulton, Tulsa, OK 74135. n/ph. May 7-21.
16. Mr. Sterling U. Innerst, 2700A Oakland Rd., Dover, PA 17315. 717-764-0281. June 1-15.
17. Ketchum Memorial Gardens, attn. Robby Browne, 486 St. Nick Dr., Memphis, TN 38117. n/ph. May 1-10.
18. Mr. Harry Kuesel, 4 Larkdale Dr., Littleton, CO 80123. 303-795-9718. June 10-30.
19. Laurie's Garden, Mrs. Lorena M. Reid, 41886 McKenzie Hwy., Springfield, OR 97477. 503-896-3756. Mid- to late May.
20. Dr. Currier McEwen, South Harpswell, ME 04079. 207-833-5438. June 10-20.
21. Prof. Wm. McGarvey, 1 Twilla Lane, Rt. 3, Oswego, NY 13126. 315-343-4137. Mid- to late June.
22. Melrose Gardens, Mr. Ben Hager, 309 Best Road South, Stockton, CA 95205. 209-465-8578. May 1-10.
23. Mr. & Mrs. Ronald F. Miller, 6065 N. 16th St., Kalamazoo, MI 49007. 616-349-5934. June 10-18.
24. Mrs. Shirley Pope, 39 Highland Dr., Gorham, ME 04030. 207-839-3054. June 10-20.
25. Royal Botanical Garden, Mrs. Joan Brown, P.O. Box 399, Hamilton, Ontario, Canada L8N 3H8. 416-527-1158. June 1-15.
26. Tranquil Lake Nursery, Mr. Charles Trommer, 45 River St., Rehoboth, MA 02769. 617-252-4310 (after dark). Peak June 1.
27. Mr. Robert Turley, 1219 Cardinal Lane, Pineville, LA 71360. 318-640-4530. April-May 1.
28. University of Minnesota, Landscape Arboretum, Mr. Michael L. Heger, 3675 Arboretum Dr., Chaska, MN 55318. 612-443-2460. June 5-15.
29. U.S. National Arboretum, Mr. Sylvester G. Marsh, 24th and R Sts., NE, Washington, DC 20002. 202-472-9100. May 25-June 10.
30. Mrs. Richard Van Valkenburgh, 212 Longwood Dr., SE, Huntsville, AL 35801. 205-534-8583. 2nd week of May.

Listing of Gardens, Continued

31. Mr. D. Steve Varner, Illini Iris, N. State Street Rd., Monticello, IL 61856. 207-762-3446. May 15-June 1.
32. Mrs. Marion Vincent, Rt. 1 Box 460, Bonneau, SC 29431. 803-565-3236. Mid May.
33. Mr. Julius Wadekamper, 10076 154th Ave., Elk River, MN 55330. 612-437-2802. June 5-15.
34. Mrs. F. W. Warburton (Bee), 2 Warburton Lane, Southborough, MA 01581. 617-366-2160. June 10-20.
35. Mr. & Mrs. Paul Watts, 133 King St., Armonk, NY 10504. 914-273-9478. June 1-10.
36. Mrs. Martha Wilkins, 7536 Waupon Rd., Oshkosh, WI 54901. 414-589-3742. June 14-20.
37. Dr. Virginia L. Winkler, 670 Pine St., Deerfield, IL 60015. 312-945-8429. Date not available.
38. Mrs. J. A. Witt, 16516 25th, Seattle, WA 98155. 206-362-9206. Mid-May--early June.
39. Mr. & Mrs. C. E. Yearwood, 136 Meier Circle, SE, Milledgeville, GA 31061. 912-452-5692. June 10-20.

Dates given are those which, on average, are the peak of the Siberian iris season in that garden. Weather being what it is, it is advisable to write or phone a week or 10 days before you expect to be in that area to make sure how that season is running.

In the case of Botanic Gardens etc. it is advisable to phone in the daytime as the number given is quite likely to be that of the garden; in the case of commercial nurseries a day call is usually all that is needed.



American Horticulture Society, Siberian Iris display planting at 'River Farm', their headquarters at Mt. Vernon, VA

MAKE A DATE TO VISIT THE ROYAL BOTANICAL GARDENS
IN HAMILTON, ONTARIO, CANADA

Why not visit the Royal Botanical Gardens in Hamilton this year. If you've never been there before, you're in for a real treat.

The Iris collection was the first important collection of herbaceous plants to be established at R.B.G. The collection occupies the inner beds of the lower terrace of the Laking Garden. Tall bearded, Siberian, Spuria and dwarf bearded Iris are displayed in this collection.

The tall bearded Iris are organized into seven beds, all of them numbered. Bed 1 is a collection of the Dykes Memorial Medal winners, the highest award attainable in the Iris world. Breeding trends can be traced in this bed from 1927 to the present. Winners of the American Iris Society's (AIS) Award of Merit have been given special emphasis in Bed 4; and in Bed 8 are the "One Hundred Best," the current favorites as voted by the AIS members. Bed 9 displays Canadian introductions. Bed 5 features an alphabetic selection of some of the best cultivars commonly grown, while Bed 2 gives a selection of good cultivars of the '60s and early '70s. Breeding trends in decades, from the '30s to the present, are highlighted in Bed 6.

Named cultivars of Siberian Iris are displayed in Bed 10. Siberian Iris selections from the plant breeding program at RBG have been planted into Bed 3 for evaluation and comparison with their parents. Later flowering Spuria and small bearded Iris are grouped together in Bed 7.

The height of bloom for the main collection of tall bearded Iris generally falls from June 5 to 15. The other groups of Iris extend this flowering period from May through mid-July. The Iris collection in the Laking Garden is viewed as one of the finest on the continent and is eagerly sought out by the connoisseur. The view of 1/4 million blooms at any one time is a truly thrilling experience.

From the Archives

*These pages are being used to reprint articles of interest from past bulletins. If you have a favorite subject or article you would like to see printed here, send me a card to that effect. - Carolee

POLLEN STORAGE--A REPORT (Vol. 3, No. 6 - Fall 1972)

Sarah Wing Highley

The research project on pollen storage has been completed. This project, which was started in 1967 and continued until 1971, was undertaken to determine the most advantageous way for the average person to store pollen from one bloom season to the next.

The requirements of successful pollen storage are:

1. successful collecting
2. complete drying
3. proper storage.

Pollen collection is often unsuccessful due to a variety of hazards, both natural and man-made. Collecting the pollen as grown, whole and uncontaminated by that of other cultivars, isn't easy, yet it is totally necessary for accuracy in later steps. When one considers the range of hazards, from thrips, bees, hummingbirds and moths, through small boys, dogs, kind neighbors and garden visitors, to careless and/or unknowing distributors--not to mention the weather--it is a miracle anything ever blooms as planned. It is best to collect pollen from buds selected from clumps which have proven typical or true to their variety. The unopened buds are picked in late afternoon, just as they start to loosen, and washed and then left to open in water. Anthers should only be collected from typical, normally opened flowers, preferably from those which have opened indoors. Label the bottle well; the easiest label is a piece of masking tape and a ballpoint pen.

Now that you have your pollen, what will you store it in? The easiest storage is a piece of wax

Pollen Storage--A Report, Continued

paper folded up like an envelope. This, however, is not very secure; it will do to get the pollen and anthers from the flower arrangement on the speakers' table safely home, but for long-term storage it is wise to purchase some 1/4 oz. French square screw-cap bottles. They can be obtained from any scientific house, or perhaps you can talk your druggist into ordering some for you. They are about \$2 a dozen. While you are ordering, get some 6- or 8-mesh indicating drierite (\$2.60 per pound). These are lumps about the size of a grain of rice or a pea, depending on the size you get. It is blue when dry and pink when wet. When it is wet it can be dried by placing it in the oven for 30 minutes to an hour at 200°F., till the color changes back to blue.

A deep plastic bowl with a tight seal completes your dessicator jar. To assemble the jar, place a layer of drierite in the bottom of the bowl and cover it with a piece of typing paper or a piece of screen; either should be cut to fit. Now you have a solid foundation to set your bottles on while drying. Put the anthers into the bottles, label them, and put the caps on very loosely. Set the bottles in the dessicator until needed, covering the bowl firmly. If the pollen is to be stored for the next season, dry for one week and then tighten the cap and drip candle wax around the opening or dip the cap into melted paraffin to seal it. Freeze in the refrigerator freezer until needed. This pollen is good for at least five years. Once the bottle is opened, however, it should be used within a week or so; it is very sensitive to moisture.

It will often be noted that anthers as treated curl up and seem to have no pollen. Some Siberians have no pollen, being only female. There is little that can be done about these male-sterile cultivars. However, the curled anthers from a fertile variety can be treated in several ways. First place the anther in the room air for several hours. He may uncurl, and even if he doesn't the remaining operations are easier. What has happened is simple, but to explain it I must go into the anatomy of our boy. Before the

Pollen Storage--A Report, Continued

pollen is ripe the anther is a hollow tube, lined with pollen. There is a groove on the surface. When the pollen is ripe this tube splits along this groove and turns back. This exposes the pollen so the bees and thrips and people can carry it to the stigma, the fertile lip of the style. Sometimes in drying the anther shrinks and curls up and this groove closes again. This calls for surgery! Use a good light, your strongest glasses, forceps or eyebrow tweezers, and a needle. Hold the anther steady in the forceps and find the groove. Now pry it open with the needle and, presto, pollen! You can scrape it out with the broad end of a toothpick, a cotton-tipped applicator stick, or even the traditional camel's-hair brush. Bowles recommended a piece of pointed sealing wax or amber rubbed on his (undoubtedly wool) suit.

If worse comes to worst, the entire anther can be ground up and used. Takes with this method are less than with pure pollen but are surprisingly good. Put the anther in a saucer, place the bottom end of the cup on it, and grind. Handle the resultant powder as if it were pollen, but use it very generously.

A Thumbnail Sketch on Hybridizing

Steve Varner

Thrips and other pollen-eating insects eat Siberian pollen as well as spreading it to stigmatic lips to pollenize. Before the bloom opens, it bulges as it develops. Just before it opens, I cut off the top of the bud, making it easier to unfurl and exposing the styles. I remove anthers and air-dry them. I also apply desired, previously dried, pollen to the stigmatic lip. I use my thumb nail which I allow to grow long (and I keep it filed sharp) to split the partially dried anther longitudinally. There are two little, long cylinders on the anther at this stage. Scraping the pollen on the back of my thumbnail tip, I insert the nail between the style and stigmatic lip, depositing pollen on the style. Removing my thumb nail, I press the stigmatic lip (pressure from the underside) up against the pollen and style. Pollen attaches to the moist stigmatic lip. I can imagine you are chuckling by now, but this process works and it is done before unwanted pollen can be spread naturally.

WHY NOT JOIN A SIBERIAN ROBIN?

The Siberian Hybridizer's Robin has been flying for several years with a nucleus of Dr. Currier McEwen, Steve Varner, Robert Hollingworth, Bee Warburton, Harley Briscoe, Sarah Tiffney and Anna Mae Miller. During the past year we have added some new names and hope there will be others desiring to join the robin program; for about two years there has been a general robin--and when we have others wanting to be robin members, we will find space for them. The round-robin letters are a great source of information that is not available via magazines and literature; and besides, you make friends across the U.S. Applications may be made directly to me--Anna Mae Miller, Director, Siberian Robins, 6065 N. 16th St., Kalamazoo, MI 49007.

Siberian Iris Robin Notes

Notes taken from Siberian Iris Robins
by Anna Mae Miller, Director

SIBERIAN DISEASE IDENTIFIED

Since 1983-84 had a lot of adverse weather--drought, sudden temperature changes in the fall to sub-zero temperatures with no snow cover in the winter--some experienced growers have lost large numbers of Siberians.

Dr. Robert Hollingworth, Purdue professor, shared with us his experiences with and identification of a problem he observed: "At least we now have our disease problem nailed down, thanks to Paul Pecknold in the Purdue Department of Botany and Plant Pathology. He cultured up a nice growth of *Sclerotium rolfsii* from some infected irises--Crown Rot to its friends (if any). Everything I have read about this pathogen fits in with my own observations of our disease except one--The World of Irises quotes Denman's 1972 article in the AIS Bulletin as saying, "Siberian irises are apparently wholly immune and the Louisianas are practically 'immune' to crown rot. Strike out the reference to siberians, but the relative immunity of Louisianas may be real. We have a bunch of La. seedlings right next to the siberians that are suffering crown rot and they seem to be unaffected. Other things which are in agreement regarding the crown rot diagnosis are its encouragement by hot weather (the reverse of botrytis, incidentally) and, unfortunately, its relative insensitivity to Benlate and many other modern fungicides--we have had no luck in treating this problem

with Benlate or several other fungicides such as Ornalin and Banrot. Agri-strep has also been ineffective for us and for Jim Foreman too, which, of course, is reasonable since the problem is fungal and not bacterial. Terraclor is recommended as a soil drench or for soil incorporation, as well as methyl bromide fumigation. However, as we draw the wagons into a circle and hope to survive this attack, the faint sounds of the cavalry can be heard in the distance. There are several new fungicides which may soon be on the market that are systemic and have excellent preventative and curative actions against these crown rot type fungi. One, called metalaxyl, is from Ciba-Geigy. I am hoping to get some as soon as possible, and will give it a try. *Sclerotium rolfsii* is apparently a ubiquitous soil fungus which attacks many types of plants. I believe our problems stem partly from the rather poor growing conditions on the heavy clay soil that I mentioned but, more importantly, we have been in the habit of plowing in the old irises in these beds before replanting with seedlings in the spring. In my naivete I thought this would help provide organic matter to improve the soil. In fact, I believe we have been providing the fungi with a veritable feast of siberian flesh and probably developed a heavy infestation which then attacked the new plants. Our problem has only occurred when we have planted a second cycle of seedlings on the same ground and was not noticeable when this land was first used for irises. Crown rot fungus is said (in Denman's article) to grow mainly on dead tissues in the soil. From now on we will be digging out and discarding the old seedlings.

"I also wonder if the weather has had a hand in all this. Of course weather is never normal, but we really have had some extremes here in the last couple of years. Last year the summer was unbelievably hot and dry. Although not so hot this year, we are again very much below normal on moisture locally. Our pond is down a foot below its banks, just like last year--and like no other year before. We are watering full tilt, but losing ground again. Both the last two springs have been unusually cold and wet; then, almost overnight, they have turned very hot on us with mid-June temperatures day after day in the low and mid-90s. Like most of you, we had a terrible sudden intense cold spell at Christmas last year after a long mild Fall that seems to have been responsible for killing several established trees on our lot and many more around town. There was absolutely no adaptation from late Fall to mid-Winter. Local strawberry growers lost most of their plants, and it seems the effects were felt as far south as Florida with many dead citrus trees. I am not sure I can make a direct correlation of this with our disease problem, but growth of our fall-transplanted irises this spring was notably poor, certainly much worse than in past years. It has taken them a full season to grow to normal height and put on increase. The extremes and sudden switches in weather have had us groaning at times and seem to have had a quite obvious adverse effect on the plants,

too. This just has to provide an opportunity for diseases to have a field day. . . ."

But also we are facing a collective problem that exists for hybridizers of many kinds of plants. We are probably starting unwittingly to breed out the resistance genes for pests and other stresses that occur in natural populations of the plants. Since we spray and cosset the seedlings, these genes have relatively little survival value and are lost. We select ferociously for flower size, form, color, branching, etc.; but disease resistance is a secondary and haphazard matter--until we run into a brick wall such as our recent experience. It is a common cry of the informed gardening public that these fancy new hybrids don't have the vigor and disease resistance of the "old" varieties. I am sure this is partly a product of rosy memory and conservatism, but also I suspect there is more than a bit of truth in it. It is inevitable, and personal experience with the TB's suggests that they are a case in point. They have become the prima donnas of the garden--too often touchy, unreliable and liable to swoon at the first stress they see. I fear we may be on the same track with the Siberians. We are now about four to six generations of selexion for "show" away from field collected strains such as Snow Queen and Emperor, e.g.

Snow Queen--]Gatineau-]Cambridge--]7862(T)--]Windwood Spring (1985 introduction). These collected plants must have been wonderfully adapted to meet the stresses of survival in a hostile world--their very existence over millenia in the field confirms this. Is five generations about the length of time it has taken us to inadvertently discard an important part of this vigor and adaptability? If true, this again presents a dilemma.

I know none of us ignore vigor in judging a possible introduction, and any iris grown up from seed for five or so years has to be able to withstand many stresses--but we cannot know how it will tolerate an unusual condition such as extreme weather or an unusual incidence of disease--or, even more relevant, a combination of these stressful events. In the field (and in the garden, too), large numbers of irises succumb when these extremes occur, and the strongest few survive. It is these stronger forms, the ones we started with, which give Siberians their reputation as being "trouble-free." It seems inevitable that unless we are very careful, and even if we are, we shall reduce this adaptability to extremes through selection for other traits and the rarity of exposure to extremes. I don't have any answer to this, which in any case is not an original observation, except to hope that through vigilance and self-discipline in only introducing the strongest irises can can avoid the fate of turning the Siberians into swooning beauties. Maybe we should grow a seedling for ten years before introduction to better discover its range of tolerances, but this isn't too practical either."

Each of the robin members has had some losses due to this disease and were very glad to have it identified.

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* Please, if there are any errors or omissions, let me know and they
will be corrected in our next issue- Carolee.