THE SIBERIAN IRIS

THE SIBERIAN IRIS

Spring 1973

Volume 3 Number 7

Index

Published by The Society For Siberian Irises. Editorial Office at 235 Koehl St., Massapequa Park, N. Y. 11762. Material printed here may only be reprinted by permission of the writer and the editor.

Deadlines: Spring issue March 10,
Fall issue October 10.

Materials may be sent as far in advance as you like- the earlier the better, in case any serious changes, or cuts that might affect the sense of the passage, need to be made, so that there will be time to correspond about these.

Black and white photographs, and line drawings in black ink, etc., will be very welcome. Please put your name and address on the back if you want them returned.

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Membership in this Society is open to members of the American Iris Society living in Canada and the United States, and to interested iris enthusiasts overseas. Dues are $2. a year.

The President's Page

As I write this on March 1st, spring in South Harpswell, Maine seems pretty far away, with snow covering the beds and temperatures still likely to reach 0 F. or below. Yet letters from friends in states with gentler winter climates mention their Siberian seedlings 5 inches high. Actually these differentes are an asset because, by judicious planning of garden trips, we can all greatly extend our opportunities to see Siberians in bloom. Furthermore, I no longer envy my southern friends their long growing season because I know that by planting the seeds indoors in March under lights, in individual pots so the roots won't tangle, I can expect almost 100% bloom 15 months later. So activity is starting here in spite of the snow, and, wherever we live, the fun of garden work is there and the anticipation of the bloom to follow. What a wonderful season spring is!

With this mailing of TSI each member receives the revised By-Laws of our Society. These have been studied with great care by the Board and are now submitted to the membership for action. Comparison with the current By-Laws will show that most sections have no, or only minor, changes. The principal changes are those designed to ensure the introduction of new blood into the Board and to so arrange the Presidency that no one will be locked into that office for more than a prescribed period of two years. The Board and I ask you to return your vote on the slip which accompanies the By-Laws and hope that you will approve them. If you are like me you probably are irritated by requests to mail back forms which are not provided with a stamped, addressed envelope for that purpose. In view of the financial problem this would impose on our Society, I trust that you will be indulgent in this instande.

During recent years there have been a number of comments in various issues of TSI concerning the problem of how best to designate the two groups of Siberians: those with 28 and those with 40 chromosomes. The two groups differ in so many ways, such as ease of culture and hybridizing compatibility, that only confusion and disappointment can result from failing to distinguish between them. During the past few months an ad hoc committee on nomenclature has worked hard on preparing the report you will find in this issue. You will note that this is merely a preliminary report and that the committee still has much to do. I urge you to read it and to follow its recommendations. And, please, if you have suggestions or questions about the report, write to me.

May I call your attention also to the excellent explanation of the correct use of floral nomenclatural terms written by Dr. George H. M. Lawrence. Most of us are only concerned with common garden terms, when we speak and write about flowers, but Dr. Lawrence's explanation can be of great help in those special instances when we need to know the correct botanical terminology. It certainly has clarified a lot of uncer-

tainties in my mind and I am sure it will save us all from errors if we study it and file it away for future reference. I am glad that it could appear in this issue with the committee report on nomenclature for the two complement each other.

I hope to see many of you at the Siberian Iris Section meeting that will be held during the Convention of the American Iris Society in Philadelphia May 28-June 1, 1973. We do not yet know the exact time and place assigned to our Section but it will be well posted at the Convention. We will have a brief business meeting of our Society but the main purpose of the session will be to provide an opportunity to learn and see what's new in Siberians and to have "expert" answers to any questions you may have. Do be there!

Lastly, in behalf of all the Officers and other Board members who took office on January 1 1973, I want to thank you for the opportunity we have been given to serve the Society; and to pledge our best effort.

WHO'S RUNNING THIS SHOW?

In this issue we are presenting brief reports on our Officers; next time we hope to tell you a little about our Board members.

Currier McEwen was born in Newark, N. J., in 1902. He studied medecine at N. Y. U. where later he was Dean and Professor of Medicine. His medical specialty is arthritis and his chief floral ones Siberian and Japanese Irises and Daylilies. He started hybridizing in 1957. Three years later he learned from Orville Fay how to use colchicine to convert diploids to tetraploids and has been hard at it ever since. The work with Siberians especially is a joint effort with his wife, Kay, at their home in South Harpswell, Maine. They have three daughters and a son, and four grandchildren.

(If you want to see what Currier looks like there is a picture of him in AIS Bulletin #206, July 1972, page 84.)

William McGarvey was born in Chestnut Hill, Philadelphia, Pa. in 1904 and was educated in the Philadelphia public schools, then at Ursinus College, the University of Pennsylvania, and Temple University from which he received his Doctorate. He went to Oswego University in 1941 and is Professor of Psychology there. Genetics has been his hobby most of his life- first working with rabbits, then dogs, then pheasants, but the cold winters at Oswego led him into working with plants, settling on irises partly because of the large number of professionals interested

in them and partly because of physical characteristics which make controlled pollination surer than for many other plants. He won the Morgan award for Siberians three years running, for DEWFUL 1970, SUPER-EGO in 1971 and EGO 1972. He says that one of the nicest compliments he has had is that the geneticists in the Oswego U. Biology Dept. invite him to lecture to their classes on his experiments with irises.

Lorena M. Reid was born in Muncie, Indiana (long ago, she says), took her B. A. at Ball State College in Biology, Spanish and P.E.; her M.S. at Iowa State in Zoology and Entomology, and has taught in Michigan, Iowa and Oregon. She is interested in all kinds of irises, but especially the species of the Californicae, Sibiricae and Laevigatae- but others too (with the TBs being low man on the totem). Other hobbies "numerous- I find most everything in this old world interesting" says Lorena: Photography, including development, reading, and nearly all kinds of physical activity. She married Alan Reid, a forester, in 1960 and has a son, Ricky, born in 1966. She is the Laurie of Laurie's Garden, which also was born in 1966.

(I bet I'm older than she is! Our 25th anniversary came the year the Reids got married- Peg)

Sarah C. Tiffney was born in Atlanta, Ga., and was educated in the Atlanta schools and Radcliffe College, and has a B. A., M. A. and Ph. D. in Botany (Mycology). She says "I read Mrs. McKinney's delightful little book on irises, and bought two Siberians while in High School; I still have one of them. It all started there. My iris interests include Siberians, bearded and crested species, Medians, Dwarf diploid bearded; also plants in general, outdoors and in, wild and tame. I also love camping and mountain walking. My husband Wesley N. is Professor of Biology (Botany) at Boston University; my son Wesley N. Jr. is Professor of Biology (Plant Ecology) at the University of Massachusetts, and son Bruce H. is a graduate student in Paleobotany at Harvard.

"We love plants!"

Gunther Stark reports on himself: "I'm 50 years old, have been married 27 years and have two children. Judy is married and we have two grandchildren; Dean still lives at home. I live on 96 acres just outside Des Moines. About five years ago when my long-time employers ended their business, I decided to change careers and am now employed at the Des Moines Waterworks Park. Thus I have made my hobby my career now. I work mainly in the crabapple arboretum and with other trees throughout the Park, but also help out in the formal garden plantings. In my own garden, no vegetables, just flowers- the season starts with daffodils then in succession dwarf irises, peonies, TBs, Siberians, Spurias then Daylilies. Thus I usually have something in bloom Spring to frost. I hybridize daylilies and have started to work with tetraploid Siberians."

SIBERIAN IRISES IN JAPAN

Akira Horinaka

The oldest well-known iris growing wild in Japan is I. laevigata and the next is I. sanguinea (I. orientalis) which is called "Ayame" in Japan. I. kaempferi was not famous in the old days, but now it is, as the ancestor of the Japanese Irises.

There is an old Japanese saying, used to express the difficulty of deciding which of two women is the more beautiful: "Which is Ayame and which is Kakitsubata?" -the latter being the Japanese term for I. laevigata. From ancient times Ayame and Kakitsubata have been the words used as metaphors of beauty. Both are considered too beautiful to compare their beauty.

In Japan the term Ayame also means 'iris' and Ayame-zoku (zoku means Genus) is Japanese for Genus Iris. As you know, the British collected I. sanguinea in Japan and crossed that with I. sibirica to establish the basis of the Garden Siberians.

We find I. sanguinea almost everywhere in our country and there are some differences in color and form according to their location. Botanically we have the following varieties: Shiro-Ayame (var. albiflora), Shirobana-chabo-ayame (var. minor forma alba) Chabo-ayame (var. pumila), Murasaki-chabo-ayame (var. pumila forma purpurata) and Kuruma-ayame (var. stellata). Horticulturally we find about two varieties in 1681, 1695 and 1698, and five in about 1868 including Momonokasetsu. But the plants fitting the latter five descriptions no longer exist. Dr. tomino collected Sujiiri-ayame, white with violet line, in 1956, and Buchizaki-ayame, white and violet vari-colored, in 1958. Both of these have shorter stems than typical I. sanguinea. For other varieties, there are Kurumazaki-ayame, with six petals on a violet flower (much like stellata), Edazaki-ayame, branched, with three flowers, violet, and with leaves wider than the typical form; Yaezaki-ayame, eight to nine petals; Kobana-ayame, a small white flower, and Chabo-ayame and Kamayama. It is said that a pink form can be found in the Akita Prefecture, but this is not proven. Shiro-ayame has two types of flowers: the typical one and another which has narrow horizontal falls with short stem. Kamayama, sometimes called I. sanguinea violacea, is deep violet. The stem is taller than the foliage and it is one of the strongest. This seems to be a garden form in Korea and a hybrid between I. sanguinea and I. sibirica. We have Hatsumurasaki, a selection of early bloomers. Some say it is the same as Kamayama; it is not clear, but I think it would be a form of Kamayama. Chabo-ayame is a dwarf and there are two types, one very short and the other a little taller.

We do not find any particular varieties other than these. These

and other Siberians are beginning to be spread all through Japan by members of the Japan Iris Society.

Next I would like to mention some of the favorites in my garden:
Whites- Snow Crest, Lights of Paris, White Swirl, Anniversary
Violets- Caesar's Brother, Velvet Night, Violet Flare
Pinks- My Love, Looks Mohrish, Mrs. Rowe
Reds- Helen Astor, Towanda Redflare, Eric the Red, Ruby Wine, Royal Ensign.
Blues- Cool Spring, Swank, Super-Ego, Pirouette, Wisteria
40-chr. and Hybrid- King's Forrest, Swirling Mist.

The great attraction for me in 1972 was Anniversary. It has a beautiful form, with green lines at the base of the falls. Super-Ego is strong against wind and rain, and its greenish-blue style arm is very beautiful. King's Forrest grows strongly; some of Mr. Kitdon's 40-chr. varieties are difficult to grow here. Fourfold White is outstanding for its free flowering, and also it is very strong and of consistent quality. I believe that Mr. McEwen's tetraploid varieties will contribute much to the field of Siberian irises. I'm looking forward to seeing the following varieties which are recent additions to my garden: Limeheart, Cambridge, Ego, Dewful, Id, Forrest Scion, Pink Haze, Ausable River, Grand Junction, Orville Fay, Ewen, Polly Dodge, Dreaming Yellow, Floating Island, Blue Burgee, Puget Polka, Camouflage, Mrs. Witt's 40-chr. species and their hybrids.

I close with the hope that all iris lovers will have a good season.

WORD FROM GERMANY

Eckard Berlin

(Condensed from a letter from Mr. Berlin and with comment from Bee Warburton.) (We do not have the pictures, alas.)

Picture 1- probably Tetra-Forrestii #2. In 1971 and 1972 I flowered plants from my colchicine-treated seedlings. Tetra-For-1 bloomed in 1971 but not in 1972. This had only one flower-stalk, though the stock was very big. Tetra-For-2 (pictured) flowered this year (1972) with two stalks, the center and right stalks. To the left I have tied a normal forrestii flower on a stick for comparison. Neither plant made seed-capsules from selfings. Perhaps I will have both blooming together next year (1973) so they can be crossed. From reports from other breeders I understand that tetraploids breed only reluctantly.

Compared to the diploid forrestii, which grow very well in my soil and climate, without additional watering, both Tetra-Fors are sickly, and the leaves were drying in August. Tetra-For-1 was a large clump this spring and grew rapidly, but in April, after a warm spell, began to be

sickly. I divided it into three parts; one part, after two weeks, was nearly dead and I redivided it into very small pieces and planted them in pure loam, without peatmoss or manure. These were still green in October, but the other two divisions, after doing well for two months, died away in August. To these I had goven peatmoss when they were planted.

From Dr. McGarvey I bought last fall (1971) FORREST SCION. The plant, set out in the fall with some peatmoss, began to die in the spring; after moving to pure loam it recovered, but the growth is not very good here. FORETELL is a very good grower here, even with peatmoss! I suppose peatmoss is not always good for Siberians- or for Japanese; I mean moss in the ground- it is good only on the surface.

Pictures 2 and 3- "USO" (unidentified Siberian object!)- I send these pictures and the following description hoping you can help me. I think I probably sowed the seed for these plants in boxes in 19661 In 1967 my garden was moved to a new place, and this box was also moved and the label was lost. The box stood until 1969 and the only living plants in the box by them were these five Siberians, which in the summer of 1969 I planted out in a row. You can see this row in the picture with my wife. All five plants are perfectly identical in respect to growth, height, collr, shape, and therefore I think theymmust be a Sibiricae species and not a cultivar. They flowered first in 1970 and because they were 5 feet high, branching- 2 and three branches!- and had brown spathes at flowering time, as in the description of I. delavayi, I believed them to be that; I also knew that in 1965 or 66 I did sow seed of delavayi. However because of flower shape and breeding behavior I think it must be a 28-chr. species- but what species in this group has such large flowers? I have true sibirica from Hungary and from Germany, but the flowers from these are much smaller.

(Bee's comment) Many thoughts come to mind in considering the implications of using a doubled forrestii in Siberian breeding. It complicates the problem of finding terms to set apart the 28- and the 40-chr. Siberians as we grow them and work with them at present. Of course, the future is very iffy, but this does open up the prospect of amphidiploid Siberians incorporating all the polymorphic traits of our two present Siberian groups into one fertile group with all their characters combined into a quite new sort of iris of, at present, unknown qualities. One has only to look at plantings of the two sorts of irises to see what a tremendous potential the combination could have.

(And my two cents: I tole you so! Bound to happen.)

We have a Correction from Sarah Tiffney.
TSI, Fall 1971, page 9, line 5- please remove 'not'. Sorry, Sarah!

NOTES FROM AN N. ZEDDER

Lucy Delany

The NewZealanders who attended the Portland Convention brought back slides ofsome of the newest Sibiricas, which they had seen in their travels. Some that they showed were EGO, SUPER-EGO, CAMBRIDGE, WHITE SWIRL and GRAND JUNCTION. DEWFUL was given to one of them- two pieces, one for me, but an unkind Agricultural Dept. confiscated them. However another piece came in successfully and I have been promised a piece of that. Both lots came in under permit, too! EGO, SUPER-EGO and FORETELL are listed for sale here, and I have orders in for them.

WHITE SWIRL flowered for me this year- the day after the Convention finished- but my house party was still in full swing, so they were able to see it. It was just beautiful, such lovely form and substance. SPARKLING ROSÉ caused discussion (it is still acclimatizing.) Some liked RED FLARE, which I think must be the one you know as TOWANDA REDFLARE, but to me SPARKLING ROSÉ is larger and taller while REDFLARE has wider standards and a more distinct spot. SPARKLING ROSÉ's spot is more blended and suffused, and I would say from memory that the whole flower is more pink. I had a small piece of SWANK, but this was not big enough to flower this year. Mrs. Malcolm, the kind friend who gave me WHITE SWIRL, SPARKLING ROSÉ and SWANK, has been importing Siberians for a few years now and is building up a good collection.

I had some interesting and even lovely seedlings. Of the 28s, one appeared to have struck color exactly halfway between a deep blue such as CAESAR, and REDFLARE. It was a sort of smoky purple. This was a volunteer in a friend's garden. I have some seedlings from pods I collected in her garden, and will collect some soon from my own plant. Most other seedlings were among the 40s, and the one I was most interested to see came from MIRZA CITRONELLA. Of this batch the best had pale blue standards speckled deeper, falls very pale blue to cream with broken stripes of blue and a deep yellow signal. Styles were pale blue with a deep lavender blue edge. The general effect was light blue. It was a clean little flower, flared, small for its type. Others were mostly deep cream with the broken stripe markings in clear purple blue, or in one very different one, a smoky purple.

Some seedlings that were allegedly from clarkei- but I doubt this- were generally light blue on cream. One had the 'doggiest' falls I have ever seen on a Siberian. Another lot were labeled '40chr. x ?- label lost!' These had the best form of all- in shades of blue and lavender, dotted and veined on pale blue or cream, with cream or gold spots.

A change from all these with their characteristic peppering and broken striping were seedlings from I. chrysographes, and they appealed

to me more than any. They were very much neater in form and height. One was a rich red violet with velvety falls, with a bright yellow spot, heavily veined black red violet, and very good form. The other I have noted as red purple- rich color- but I would call it a very deep cyclamen. It had very velvety falls, and a bright yellow spot almost completely covered with black spots and veining.

Interest in species has been growing very quickly here over the last few years, and there were many types displayed at our last Convention, with Siberians well to the fore. The New Zealand Iris Society Convention was held here in Nelson in November. As I was living alone at the time I invited five iris friends to use my home as a motel. We had an hilarious time for nearly a week. But as our flowers were early, and the Convention a week later than usual, the Talls were past their peak except in one garden, and the species came into their own. I think a lot of people really learned something here, especially about the Sibiricae. I had extracted from Jean Witt's letter in the Robin quite a lot of information and had her permission to send it to the Editor for our September Bulletin, but missed the date so it will be in the March issue. After all our discussions in November, these notes will be a good follow-up.

IN MEMORIAM

Gladys Martin Wiswell

Gladys Wiswell died, January 11 1973, at Heywood Memorial Hospital in Gardner, Mass. where she was visiting a son, Roger Martin. She had lived for many years in East Arlington, Vt. where she came to love gardening and particularly irises, and had for a number of years been hybridizing them, particularly with the Siberians. She had not been a member of the American Iris Society but had been a charter member of the American Hemerocallis Society and also had hybridized these.

She introduced three Siberian irises, all of which won an H.M.: CARRIE LEE, named for her mother, CLARET, and SAPPHIRE BOUQUET. Her pride and joy was her hybrid, AMAZEMENT, a cross between the Siberian WHITE EMPRESS and the TB ELSA SASS. Several grape-colored Siberians as well as a few plicata-types were among her most recent seedlings.

To all who knew her in person or through her creations she will be truly missed.

Kevin Vaughn

CORRECTION

Roy Davidson has asked Dr. McEwen to correct a misstatement in the article (TSI, Fall 1972, p. 15) which mentioned the bed of species irises in the Tompkins garden. It was planted not by Mr. Davidson but by Lorena Reid and the late Ruth Hardy, to whom the credit should go.

PRELIMINARY REPORT OF THE AD HOC COMMITTEE ON NOMENCLATURE, MARCH 15 1973

In recent years there has been considerable discussion as to how best to designate the two groups of species and their hybrids represented by those Siberian irises with 28 somatic chromosomes and those with 40. This question has, naturally, been of special interest to members of the Society for Siberian Irises and has been reflected in articles and comments in The Siberian Iris (1-4). As a result, an ad hoc committee was appointed in December 1972 to study the problem and make recommendations. This is the preliminary report of that committee.

Background: At the time that Dykes reported his classification of irises in 1912 (5, 6), chromosome counts were unknown and his decision to place all of these irises then known in a single "sibirica group" was based solely on various morphological features which they had in common and which tended to distinguish them from other irises. Subsequently Lawrence (7) in 1953* and Rodionenko (8) in 1961 followed the same plan in their more modern classifications and placed all the Siberian irises in a single series Sibiricae. Meanwhile, however, with the development of chromosome counting, it was found over the years 1928 to 1934 (9-13) that the species included in series Sibiricae fall into two distinct categories so far as their chromosome numbers are concerned, namely, II. sibirica and sanguinea with 28 somatic chromosomes and II. clarkei, delavayi, wilsonii, chrysographes, forrestii and bulleyana with 40. To our knowledge II. dykesii and phragmitetorum have not been counted but they are presumed to belong in the 40 chromosome category. Meanwhile, also, it became well recognized by hybridizers that, whereas the two 28 chromosome species crossed readily, as did the various 40 chromosome species, crosses between members of the 28 and 40 chromosome categories were very rarely successful; and that when they did succeed the resultant seedlings were sterile**. Furthermore accumulating experience with the two categories brought to light various cultural and morphological differences which tend to distinguish I. sibirica and I. sanguinea from the others. In 1951, on the basis of extensive studies of chromosome numbers and cross fertility, Simonet (14) separated the 40 chromosome species into a separate series which he called Chrysographes after the species of that name. Recently, in his Catalogus Iridid, Werckmeister (15) has

* The classification of irises used in Garden Irises, edited by L. F. Randolph and published by the American Iris Society, St. Louis, Mo., 1959, is that of Lawrence.

** The only exception known to the committee is the extremely interesting cultivar FORETELL obtained by Dr. W. G. McGarvey from a cross of I. forrestii by a 28 chromosome seedling, which is reported to cross successfully with both 28 and 40 chromosome species and cultivars.

adopted Simonet's series Chrysographes as a distinct series of Apogon irises coequal with Series Sibiricae. Thus, in current classifications of irises the Siberians are treated in two different ways: in the standard classifications of Dykes, Lawrence, and Rodionenko they are placed in one series; whereas in Werckmeister's Catalogus Iridis they are divided into two series.

Considerations of the Ad Hoc Committee: It was agreed early by the ad hoc committee that the question assigned to it for study must be considered from two points of view: that of the taxonomist and that of common garden usage. The committee is fully aware of its limitations as a body competent to make taxonomic decisions but clearly a choice must be made between the two types of classification of Siberian irises now in existence. From the practical standpoint the committee believes that for the present it will be advisable to follow the classification of Lawrence and Rodionenko and continue to place both the 28 and 40 chromosome species and their cultivars in a single series Sibiricae. The committee gave thought also to the possible desirability of subdividing Sibiricae into two subseries, one to include I. sibirica and sanguinea, and a second to include the others. It was agreed, however, that whereas there is much in favor of such a proposal, it is one which requires study by professional taxonomists. The committee, therefore, withholds judgment regarding this point in the present report.

The committee has also given much thought to "common usage" terms which can be recommended. The common term Siberian (or siberian) irises is well established throughout the English-speaking parts of the world and, indeed, is that used in the name of our Society; but there are, at present, no comparable terms to designate the 28 and 40 chromosome categories. To be sure, the 28 chromosome species and ciltivars derived from them have often been referred to in the United States and Canada as "garden Siberians". This, however, is no longer a useful term now that the 40 chromosome cultivars are becoming increasingly popular and in some gardens outnumber the 28 chromosome ones. The committee has explored the suitability of using geographic terms but has enountered difficulties. All the 40 chromosome species appear to be found in southeastern China, but in the case of the 28 chromosome species, one is from Europe and the other from Asia. Another problem is presented by the fact that the geographic names which have thus far been suggested have been found to be already assigned to other irises. Hence the committee has not yet been able to propose geographic designations which would be fully suitable. This will be given further study. A third suggestion was the use of 'made up' names as for example San-Sibes (from sanguinea and sibirica) for the 28s and Sino-Sibes for the 40s, the 'Sino' to indicate their Chinese origin. However, the committee is well aware of some objections to this approach, particularly in view of

the fact that such hyphenated terms are now used to designate hybrids between Siberian and other irises.

After debating the various possibilities the committee returned to consideration of the use of chromosome numbers as the most practical way at present to distinguish between the 28 and 40 chromosome species and cultivars. This has the important advantages that it leaves no doubt what is meant and is already in common use. Furthermore, with the advent of tetraploid cultivars and of hybrids between 28 and 40 chromosome species, the use of chromosome numbers can serve as a form of 'shorthand' indicating the types of parents and the probable genetic compatibilities.

Recommendations: On the basis of the considerations discussed above, the ad hoc committee on nomenclature recommends the following:

1. That the Society for Siberian Irises continue to follow the classifications of Lawrence and of Rodionenko as they relate to Siberian irises and place all in a single series Sibiricae.

2. That decision regarding the advisability of subdividing series Sibiricae into two subseries be postponed until the committee has the opinion of professional taxonimists.

3. That for common usage the two groups within series Sibiricae be referred to for the present by their chromosome numbers, i.e. 28 chromosome and 40 chromosome groups, species, cultivars, seedlings etc. (It is understood of course that individual species and cultivars will be designated by their individual names.)

4. That these recommendations be modified as further study or advancing knowledge makes revision desirable; and that the committee actively continue its study.

The committee gratefully acknowledges the helpful advice given by Mrs. Jean G. Witt, Mr. Leroy Davidson, and Drs. George H. M. Lawrence, Lee Lenz and Fitz Randolph.

The Ad Hoc Committee on Nomenclature
Peg Edwards
Sarah Wing Highley
William G. McGarvey
Lorena Reid
Kevin Vaughn
Julius Wadekamper
Bee Warburton
Currier McEwen, Chairman

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RULES GOVERNING FLORAL NOMENCLATURE

Uncertainty regarding the correct format in which to write the names of various categories within the genus Iris led to an enquiry addressed to Dr. George H. M. Lawrence, a specialist on plant nomenclature and taxonomy, whose classification in the one used in Garden Irises, His reply was so clear and concise that it must be of interest and value to our members. Dr. Lawrence has kindly given permission for his letter to be published in TSI, with an 'editorial' comment as printed below.

P. O. Box 177
East Greenwich,
Rhode Island 02818
17 February 1973

Dr. Currier McEwen
South Harpswell, Maine 04079

Dear Dr. McEwen:

Responding to your inquiries of 8 February, perhaps the following will be helpful concerning nomenclatural situations.

In the first place, one must distinguish vernacular (i. e. common) names from the more formal scientific names that are written in Latin.

Frequently the vernacular name is adecapitalized form of the Latin name. E. G. dahlia(s) for the genus Dahlia, tulip for Tulipa, and iris for Iris. Editors of most publications set Latin names of genera and groups of lower rank in italics (underscored in typescript) although some editors do not italicize generic names. It is a matter of individual choice, whether to capitalize common names or not (Siberian iris vs. siberian iris, Sibericas vs. sibericas, or Red Maple vs. red Maple or red maple).

Latin names of groups in any rank above that of species are capitalized- e. g. genus (Iris), subgenus (Iris), section (Spathula), subsection (Pogon), series (Sibiricae). The names used to identify the ranks or categories are not capitalized. The name for the iris family (Iridaceae) may be capitalized or not.

The Latin name of a species os of two words, the generic name (Iris) followed by a specific epithet (sibirica or forrestii). The species name (e. g. Iris forrestii) is known also as a binomial, a name of two words.

By international legislation adopted in 1954, all specific epithets are in lower case type (no capital initial); whereas the generic term in the binomial follows the general rule and has a capital initial. At the same time it was legislated that all specific epithets in the genitive case (whether masculine or feminine in gender) are terminated with the double i (ii) if the name so commemorated ends in a consonant other than the letter 'r' or 'y'. Whenever such a name was initially published with a single i, it is to be treated as an orthographic error and is to be corrected to ii.

Thus, Iris wilsoni is to be corrected to Iris wilsonii, and I. sargentae to I. sargentiae. But, Iris kaempferi named for Engelbert Kaempfer, and whose name ends with 'r', remains I. kaempferi. I. purdyi is terminated by a single 'i' since the y has the value of a vowel. All such names ending in a vowel, are terminated by one 'i' (e. g. Rhododendron fortunei).

While botanists have been prompt in applying these rules re the double i, horticulturists have been lax to do so.

The International Code of Botanical Nomenclature, which governs the practice in these matters, has never legislated the typeface to be used for scientific (Latin) names. This is a matter of convention. Some editors use bold face type (roman or italic) for latin names, In some formats, they have preferred to set them in what is called 'caps and small caps'.

The word 'group' is used taxonomically as a general term for any category above the rank of species. Conversely, the term series is a particular category. The International Rules do stipulate the hierarchy in which the different categories (or units of classification) stand with relation to one another. Here it is:

Kingdom (Vegetable)
Division (Spermatophyta, seed plants)
Subdivision (Angiospermae, as opposed to gymnosperms)
Class (Monocotyledoneae)
Order (Liliales, to which irises belong)
Family (Iridaceae) (cont'd)

Family
Subfamily (Iridoideae, for Iris, Tigridia, Moraea etc.
Tribe (Irideae)
Genus (Iris)
Subgenus (Iris)
Section (Spathula)
Subsection (Apogon)
Series (Sibiricae)
Subseries
Species (Iris sibirica)

Categories below the rank of genus, but above that of species, are termed infrageneric categories. The terms of infrageneric categories, as well as those of higher rank usually are not capitalized. The Latin names of a group of plants assigned to a particular category are always capitalized.

(In a subsequent note Dr. Lawrence explained that the initial letters of the categorical terms in the hierarchial list shown above are capitalized because they stand alone in the list just as they would be if they werethe first words of a sentence. As stated in the paragraph above and in the fourth paragraph of the letter, they would not be capitalized if they stood elsewhere ina sentence. C. McE.)

Categories below the rank of species are termed infraspecific categories; four are commonly encountered in modern botanical literature. In descending order they are (1) subspecies, (2) variety (Latin: varietas). (3) forma, and (4) cultivar. The first three are written in Latin, and are subject to the same rules that a pply to specific epithets.

The category of cultivar came into usage in 1950 and is used for variants of a species or species hybrid, that are either produced genetically by man or have been selected by man from native populations. Virtually all garden varieties of plants are properly cultivars. All clones of plants, reproduced only by vegetative means, are cultivars.

A FEW COMMENTS ON NOMENCLATURE AND TYPING

Peg Edwards

I hope all our multitudinous contributors will pay heed to Dr. Lawrence's very informative article, as well as to the interim report of the Committee, in writing articles for us. But there are a few little problems (from my point of view as typist) that aren't covered in the last few pages. For instance, my gadget doesn't have that useful plus-or-minus sign or the 'equals' sign, so I am offering the suggestion to anyone who might be concerned with these in reporting something, that they allow me to use, in reporting registrations of tetraploids, for example, the abbreviation ca. (for circa) to indicate an estimated

but not counted chromosome number, and the abbreviation eq. in lieu of the 'equals' sign. OK?

Also, while it seems to be the custom, in underlining the Latin name of a species, to bring the line under the name of the genus, and then space over to the epithet. I prefer (and there ain't no law agin it, is there?) to underline the whole name as a unit, thereby reminding myself if nobody else that this is a unit and mustn't be split up. We will, of course, in future make sure that the name of a species is properly put as I. forrestii, not as just forrestii like some poor nameless orphan. However if someone writes of a 'forrestii-wilsonii hybrid' with no indication of which is the mama and which the papa, and I'm running short of space on that page and don't want to carry the article over to a single line on the next, I shall print that as it stands rather than write (as would be correct) 'a hybrid between II. forrestii and wilsonii.' I mean, you get into this sort of thing and it is astonishing the things you will do to make the articles and the pages come out even.

And while I have indicated a preference for giving names of cultivars in 'Quotes' rather than in CAPITALS (see the Fall 1972 issue) I have used the Capitals in this issue because the first two articles I typed up used them and I just absentmindedly went on that way. But I promise you next time I won't. However I must say that either form is perfectly correct; and so is it to write cv. White Swirl, but not to write var. White Swirl. (I would write the whole thing over but here we are on p. 17 and I am just too pooped!)

You'll put up with my little whims, won't you?

And incidentally, for the benefit of those of you who exhibit in local flower shows judged under Federated Garden Club rules: National Council Judges are expected, when faced with two equally good specimens, to gove the preference to the one that is more accurately labeled. SO- if in that June show there are three perfect specimens of, say, 'Chrysler Imperial' H.T., and one is labeled Red Hybrid Tea Rose, and the second is labeled 'Chrysler Imperial', and yours is labeled cv. Chrysler Imperial- you know who'll get the nod?

****

Sarah Tiffney reports: I have some noce red seedlings with branching from three crosses: Eric the Red X Royal Ensign, (Snow Queen x Eric the Red) X Eric the Red, and (Eric the Red x Tycoon) X Eric the Red.

I had a seedling last summer from (I. sibirica-type albino x Snow Queen) X (I. sibirica-type albino x Snow Queen)- that is, the first-generation plant (which had blue flowers) was self-pollinated. This second generation seedling was white with quite a lot of yellow in it; on cloudy days the falls were quite yellow and the standards paler yellow, but in bright sun they faded toward creamy white.

FOLLOW-UP ON SLIDES

Elizabeth Seibert

I had hoped the article in the last issue would do some good. To date I have received NO slides except a group from Dr. McEwen as a result of it. I have finally made a complete list of the slides I now have. Many are duplicates. A few, over the years, have been lost, strayed or stolen- no, I really don't think it was done on purpose, but there are some missing. I do have a few slides of flower arrangements which I don't normally include in the listing. All I can say is that this selection is a poor showing- we just don't have a good up-to-date slide collection. I do have a good mailing box; the last borrower donated to the program a plastic recipe box in which the whole batch can easily fit with room for about 50 more. One thing that would be very helpful to me would be if donors of slides would send a description of the slide on a separate piece of paper (parentage, etc.) with just the name on the slide itself. Some of them are so loaded with descriptive matter that there is no room to use a numbering system on them.

These are what we have. Quality varies and there as you can see few of the newer ones.

1. True Blue
2. Morning Magic
3. Rimouski
4. Zest
5. Towanda Redflare
6. Llewellyn
7. Stephenson sdlg. (typical throwback)
8. Madawaska
9. Ann Stahlman
10. I. sibirica
11. Summer Sky
12. Matane
13. China Blue
14. Pygmy
15. My Love
16. Royal Herald
17. My Love
18. Zerita
19. Towanda Redflare
20. Towanda Redflare
21. Matane
22. Tycoon
23. Cool Spring
24. Cool Spring
25. Bob White
26. Gatineau
27. George Wallace
28. Gatineau
29. Mountain Lake
30. Mrs. Rowe
31. Mrs. Rowe
32. Ruby Sprite (a dwarf)
33. Seven Seas
34. Grandis
35. Helen Astor
36. Group- Yankee Trader, Towanda Redflare, Summer Sky, Gatineau, Helen Astor, Zest.
37. Silvertip
38. Zerita
39. White Swirl
40. Turquoise Cup
41. Skylark
42. Congo Drums
43. Group- Zest, Mildred Stahlman, Ann Stahlman, Matane, Madawaska, Monarda & Jake (TBs).

44. Snow Queen
45. Caesar's Brother, white TB sdlg.
46. Summer Sky
47. Summer Sky, Gatineau in back.
48. I. chrysographes
49. Violet Flare
50. Lactea
51. Blue Star
52. Fairy Dawn
53. Cool Spring
54. Crystal Charm
55. Red Emperor
56. Snowy Egret
57. Soc. Sibirica- sanguinea
58. Royal Herald
59. Ottawa
60. Eric the Red
61. Mattawin
62. Tunkhannock
63. Congo Drums
64. White Empress
65. Delavay
66. Bob White
67. Group- unidentified
68. White Dove
69. Starwheel
70. Group- Sky Blue, Alaskan Sibirica, Fairy Dawn, Red Emperor, Seven Seas, Royal Ensign
71. Violet Flare

From Mildred Johnson
A. Periwinkle
B. Tycoon
C. White Dove
D. Caesar's Brother
E. Blue Brilliant
F. Mandy Morse
G. Snowcrest
H. Snow Flare
I. Royal Herald
J. Blue Moon
K. Cool Spring

From William McGarvey
1. McGarvey garden 1965
2. Garden, AM, Siberians & Lily
3. Nellie E. (63-3-2-2)
4. Nellie E., 2-year clump
5. Dewful (63-4-4)
6. Pedigree picture
7. Sdlgs, White Swirl x Med. Bl. Lt. Sty.: 63-4-2, 63-4-3, 63-3-2, 63-2-2
8. Ego (63-4-6)
9. Ego (2-year clump)
10. Sdlg. P-2 (Royal Ensign x self)
11. Inroy (?) very light pink, Royal Ensign x self
12. Blue Burn (63-4-2) 3-year clump
13. Blue Burn, 3-year clump, with Lydia Winter and Jane Hall
14. King's Forrest
15. Super Ego (63-2-2)
16. Super Ego, 3-year clump

(2¢ worth) Kids, couldn't we do better by our Society that <u>this</u>? Some of those slides I took back in 1960- I recognize the group shots that used to be in my garden- and Star Wheel, f'gooniss sakes, It is extinct! Even I don't have a piece any more. There are plenty of good Siberians there- but where are Ruby Wine, Swank, Foretell, Sky Wings, Ausable River, Cambridge- where's our Dykes winner? Ah, come on, kids! If you have'em, shoot 'em for the set. And take a few B&W for TSI, too.

Remember that our slide set is one of the best ways we have of making converts. It is more apt to go to a garden club, or provide a program to TB fanciers, than to us who are already convinced. Let's make it convincing.

DISPLAY GARDENS

Julius Wadekamper

These have been listed in alphabetical order by cultivars; the gardens they are in are indicated by: C-F, Cook-Flintoff; H- Harder; L- Luihn; P- Peck; S- Schreiner; V- Vaughn; W- Wadekamper.

Abitibi- L.
Acuta- C-F, H, L.
Ahalya- C-F, H, L.
Amelia Earhart- C-F,L.
Anniversary- S.
Ausable River- L, P.
Barbara's Choice- C-F,S.
Baxteri-L.
Beth Ellen- H, L, V.
Bickley Cape- C-F, L.
Big Blue- P.
Big White- P.
Blue Brilliant- C-F, H, L, P, S.
Blue Burgee- P.
Blue Burn- P, V.
Blue Butterfly- H.
Blue Cape- C-F, H, L, S.
Blue Charm- L.
Blue Heron- L.
Blue King- L.
Blue Mere- C-F, H, L, S.
Blue Moon- C-F, H, L, V, W.
Blue Pennant- P.
Blue Ridge- C-F, L, W.
Blue Star- C-F, H, L, V.
Bob White- C-F, H, L.
Bracknell- C-F, H, L.
Bright Shadow- C-F, L, V.
Butterfly- L.
Caesar- C-F, L.
Caesar's Brother- C-F, L, P, W.
Caesar's Ghost- C-F, L, V.
Camberley- L.
Cambridge- C-F, L, P, S.
Canford- H, L.
Canton Blue- H, L, V.
Carrie Lee- C-F, H, L, V.
Claret- C-F, H, L, V.
Clear Pond- L, P.
Cleve Dodge- P.
Congo Drums- C-F, H, L, P, V.
Cool Spring- C-F, H, L, P.
Court Ballet- S.
Court Violet- L.
Court White- L, S.
Crystal Charm- C-F, H, L.
Dark Marine- L.
Deep Shade- V.
Dewful- L, P, V.
Distinction- H, L.
Dragonfly- C-F, two forms.
Dreaming Spires- S, L.
Dreaming Yellow- P, V.
Early Bluebird- P, V.
Ego- C-F, H, L, P, V, W.
Ellesmere- C-F, L, S.
Emperor- H, L, P.
Ensata Lactea- L.
Eric The Red- C-F, L, P.
Ewen- P.
Fairy Dawn- C-F, L, W.
Floating Island- P.
Florrie Ridler- L.
Forrest Scion- P.
Foretell- P.
Fourfold White- P.
Gatineau- C-F, L, P.
Gayheart- C-F, H, L.
George Wallace- C-F, H, L.
Grandis- C-F, two forms.
Gray Dove- C-F.
Greg's Blue-L.
Grey Prince- C-F, L.
Halcyon Seas- L.
Heavenly Blue- H, L.
Helen Astor- C-F, L, W.
Helicon- C-F.
Id- P.

Illini Encore- V.
Imperial- L.
Japanese White- L, S.
Jimmy's Gem- L, S.
Joretta- H, V, W.
June Violet- V.
Kenogami- L.
Kingfisher- C-F.
Kingfisher Blue- C-F, H, L, W.
King's Forrest- P, V.
Kootenay- C-F.
Lady Godiva- L.
Lady Northcliffe- C-F, H, L.
Lazure Blue- C-F, H, L.
Lights of Paris- C-F, L, P.
Limeheart- L.
Little Tricolor- P.
Little White- P, V.
Llewellyn- C-F, H, L, W.
Looks Mohrish- C-F, H, L, W.
Madawaska- H, L.
Mandy Morse- C-F, L, V.
Marilyn Holmes- P.
Matane- C-F, L.
May Morning- C-F, L.
Mildred Peck- C-F, L, V.
Miss Duluth- C-F, L.
Moonsprite- C-F, H, L. W.
Morning Magic- C-F, L.
Mountain Lake- C-F, L, W.
Mountain Pool- L.
Mosve- L.
Mrs. Perry- C-F, L, W.
Mrs. Rowe- L, V.
My Love- C-F, L, W.
Natick- C-F, L, W.
New Blue- H, L.
Night Sprite- L.
Nigrescens- C-F, H, L.
Nipigon- C-F, L.
Nora Distin- C-F.
Nottingham Lace- H, L, S.
Orientalis Nana- L.
Orville Fay- P.
Ottawa- C-F, H, L, P, W.
Pansy Purple- P.
Papillon- C-F, H, L.
Periwinkle- H, L, P, W.
Perry's Blue- C-F, L.
Perry's Pygmy- C-F, H, L.
Peter Pan- L.
Pickanock- L.
Pirouette- C-F, L, P, S, V.
Placid Waters- C-F, H, L, S.
Polly Dodge- P.
Powder Blue- C-F, H, L.
Puget Polka- C-F, L, S.
Purple Mere- H, L, P.
Red Empire- L.
Red Emperor- C-F, L.
Red Raider- C-F, L.
Rideau- L.
Rimouski- L.
Royal Ensign- C-F, L.
Royal Flush- L.
Royal Herald- C-F, H, L, P, V, W.
Ruby Wine- C-F, H, L, P.
Sailor's Delight- H, L.
Salem Witch- H, L, V.
Sally Kerlin- P.
Sapphire Bouquet- H, V.
Sea Shadows- S, L.
Sea Turn- L.
Seven Seas- C-F, H. L. V. W.
Shadow Lake- V.
Silvertip- C-F, H, L, V.
Skeena- C-F, L.
Skyblue Water- L.
Skylark- C-F, H, L, W.
Skyrocket- C-F, H, L.
Sky Wings- P, V.
Snow Bunting- L.
Snowcrest- C-F, L, P.
Snow Flare- C-F, H, L, V.
Snow Queen- L.
Snow Wheel- C-F, H, L.
Snowy Egret- H, L.
Souvenir of Lawrence Neel- L.
Sparkling Rosé- C-F, H, P, V.
Stardust- L.

Stellar Blue- V.
Summer Sky- C-F, H, L, P.
Sunnybrook- C-F, L.
Superba- L.
Super Ego- H, L, P, V.
Swank- H, L, P, V.
Swirling Mist- C-F, L, S.
Tealwood- C-F, L, P, S, V.
The Gower- C-F, L.
Thelma Perry- C-F, H, L.
Thisbe- L.
Timeless- L.
Towanda Redflare- C-F, L.
Tropic Night- C-F, H, L, P.
True Blue- C-F, H, L.
Tunkhannock- C-F, L, P.
Turquoise Cup- C-F, H, L, W.
Tycoon- C-F, L, P, W.
Velvet Gown- C-F, H, L.
Velvet Night- C-F, L, P, V, W.
Violet Flare- C-F, H, L, P, S, V.
Violet Repeat- S.
Whirl- V.
White Cape- L.
White Dove- C-F, H, L.
White Emperor- H, L.
White Empress- H, L.
White Flare- L.
White Horses- C-F, L.
White Magnificence- L, P, S, V.
White Standard- L.
White Swirl- C-F, H, L, P, S, V.
White Way- L.
Wisley White- C-F, H, L, W.
Wisteria- C-F, L, V.
Yale Blue- L.
Yankee Trader- L, P.
Yellow Court- C-F.
Zerita- C-F, H, L.
Zest- C-F, two forms; H, L.

Sibiricae-Californicae hybrids:
By-A-Bee- C-F
Fair Colleen- C-F, S.
Margot Holmes- C-F
Pacific Waves- C-F.
Swirling Mist- C-F, L, S.
Mahood sdlgs.- C-F.

Species:
I. bulleyana- C-F.
I. chrysographes- C-F, 5; L, 2; S.
I. clarkei- C-F, 2; S.
I. delavayi- C-F, 2.
I. forrestii- C-F, S.
I. sibirica- C-F, L.
I. wilsonii- C-F.
Species, Ludlow & Sherriff #34- C-F.

40 chr. hybrids:
I. chrysographes x delavayi- C-F.
"Chrysofors"- C-F.
I. delavayi x ?- C-F, 3.
I. wilsonii hybrid- C-F, L.
I. bulleyana hybrid- L.

Seedlings:
Cassebeer 998- P.
" 993- P.
H. Bartholomew sdlg.- V.
Elwell 1-68- V.
McEwen tetras- V, 4.
McGarvey LgB- V.
" 61/Cas 4(4)- P.
" 62/19A- P
" 68-64-22- P.
Varner 6S-1- L, P.
" 63-3- L.
" 1177- V.
" 1267- V.
" 8212- L, V.
Vaughn purple 40- V.
" red 40- V.
" GTCL-1- V.
" TP-1- V.

Vaughn TP-2- V.
" 68 CH-1- V.
" 70-G-3- V.
Warburton 69A-2- V.
Warburton 69B- 10- V.
Wiswell 'eye catcher'- V.
" 'grape'- V.
" 'white spot'- V.

Unfortunately we do not have as yet the complete list of Dr. McEwen's display planting, but certainly for anyone who can get there the second and third generation tetraploids alone would be worth the trip.

Verna Cook and Jerry Flintoff- 6924 Pacific Hyway East, Tacoma, Wash. 98242
Larry Harder- Ponca, Nebr. 68770
Vi and Walt Luihn- 523 Cherry Way, Hayward, Cal. 94541
Dr. Currier McEwen, South Harpswell, Maine 04079
William Peck Jr.- Yellow Cote Rd (Mt. Rt. Box 30) Oyster Bay, N. Y. 11771
Kevin Vaughn- 2017 South Athol Rd., Athol, Mass. 01331
Julius Wadekamper- University of Minnesota Landscape Arboretum, Maple Lake, Minn. 55358

For directions to any of these gardens write directly to the garden well in advance.

CRITTERS IN FLOWER BUDS

Sarah Tiffney

I frequently open a Siberian bud that looks perfect only to find that it is chewed up inside. Sometimes the culprit has gone, but often he is still there. Maybe one time out of nine or ten he is an iris borer, a long yellowish-white larva with a tan head and "legs" that are lagge enough to see and make him look irregular. The other eight or nine times I find a shorter critter, white, smooth, cone-shaped (pointed at one end, square at the other) with a tiny black dot at the pointed end. This I think is the larva of a fly, and I think I can guess what fly it is too- one I see sitting on iris leaves in the garden, slightly smaller than a housefly, slightly hump-backed, with wings shorterthan the housefly's and more parallel to the body. I have not yet succeeded in growing a larva through the pupal stage to maturity in order to be sure of its identity, though I have two pupae that may emerge this spring.

I presume that just before or at the time of bud opening, both these larvae drop out onto the ground; the borer goes into a handy iris plant and probably the fly pupates, perhaps in debris or just under the ground surface. I have never found any indication that either goes from the bud down the stem; the iris ovaries are always intact and there are no entry holes on the stems below the ovaries.

Whatever you do to control borers ought to take care of the borers. I would think the treatment for the presumed flies would be to dust or spray the plant occasionally with something that kills flies.

Some years back I developed a plague of pod weevils (Mononychus vulpeculus) no doubt as a result of neglecting to pick and dispose of all bee pods as assiduously as I should have done. In addition to laying eggs in pods and thereby ruining seeds of crosses, the adult weevils also chew up petals and make a ragged mess of the flowers. I eliminated most of them at least as far as chewing the flowers was concerned by a spray put directly on the flowers once, and repeated a week or two later if enough weevils reappear to warrant it. The spray spoils the flowers that are open that day and spots the outside of the petals that are exposed in ready-to-open buds, but this is a small price to pay for getting rid of the pesky critters. I may have used DDT- I do not remember, and this was back in the bad old days when we did not know any better- but I think there are several acceptable substances now that would do the job.

The best way to deal with both the weevli and the verbena-bud moth (Endothenia hebesana) which also lays eggs in seed pods, is to pick and dispose of all bee pods early on, so that the next generation cannot mature. The only negative aspect of this procedure is that it makes the arranging ladies very sad- Siberian pods are fine dried arrangement material.

MORE SOURCE MATERIAL

Imperial Flower Gardens, Box 255, Cornell, Ill. 61319, requests that you include a stamp for their list.

Old Brook Gardens, 10 S. Franklin Circle, Littleton, Colo. 80121, will send a catalog if you request it; see their ad in the 1973 April Bulletin of AIS.

White Flower Farm, Litchfield, Conn. 06759, has Siberians in the Fall catalog which is now $3.

Tranquil Lake Nursery, River Street, Rehobeth, Mass. 02769, carries Siberians. Send for catalog.

Reinhardt's Iris Garden, 14151 W. National Avenue, New Berlin, Wisc. 53151, offers their own introductions; see ads in April, 1971 AIS Bulletin page 31, and April 1973 Bulletin.

Sarah Tiffney writes that she thinks she recentl came across a statement that the Marx catalog is 50¢, not $1 as mentioned in the last issue, but she cannot find it again.

Anyone knowing of any mail-order sources of Siberians that they have found reliable, is urged to write Mrs. Tiffney (address page 2) so that it can be included in the Source List.

ROBIN EXTRACT

Jean Witt writes, in the Siberian International Robin, Jan. 23 1973:

There is one bit of rather exciting news that will affect us indirectly. At long last we are getting reports on pigment research. This is being done by graduate students under the direction of Norlan C. Henderson at the University of Missouri. The first article appeared in American Horticulturist, Vol. 51, # 3, Fall 1972, pp 34-39, "Bearded Iris Flower Colors". With it the concept of 'blue' and 'Yellow' irises goes down the drain. Instead we have the following classes, each containing several pigments:

Flavonoids, cell sap pigments, divided into
- Anthocyanins of which delphinidin has been known in TBs and malvadin, now found in TBs, and
- Flavones of which the following have been identified:
  - Mangiferin (these are colorless
  - Irigenin to pale yellow
  - Apigenin A copigments)
  - Apigenin B

Carotenoids, Fat Soluble plastid pigments, of which we have two groups
- Carotenes: alpha-, beta-, and gamma-carotene, and
- Lycopene (tangerine)

Xanthophylls: five, not individually identified at present.

Chlorophylls A and B do not enter into flower color to any extent but are the green leaf pigments. Really green flowers will perhaps need these, but Green Spot manages to be fairly green with a combination of delphinidin and flavone.

So visual color in any one flower is dependent on some particular combination of these elements. It gives you a little idea of how TB irises manage to occur in such a very wide variety of colors. Generations of hybridizing have combined and recombined the pigments, and the variations are virtually endless.

How many of these same pigments do we have among the Siberians? I am going to hazard a guess that we will find the situation much the same. Delphinidin and malvadin have been identified in I. chrysographes and I recently read that they have been found in I. delavayi also. The flavones are ubiquitous plant substances; it is certain that they are in Siberian flowers, but whether they will turn out to be the same as those of TB or different ones remains to be seen. Very bright yellows are usually carotenoid yellows; so I think we can expect to find very much the same range of carotenes and zanthophylls in Siberian flowers, particularly in the signals.

In other words, I think that whatever pigment information comes

through for TBs we can expect will apply in greater or lesser degree to our work with Siberians- don't underestimate the color variations that may be in store for us! We could have tangerine pinks too, someday, perhaps.

Now let's take a look at Lucy F.'s pink 40. So far this is a 'first'. I am going to stick my neck out a mile and say that this may be malvadin pigment by itself. Henderson seemed to think that it would be difficult to separate the two anthocyanins, but I don't agree,- or perhaps they needn't be completely separated- only the one increase while the other diminishes. They seem to be sufficiently separated in I. kaempferi, where some flowers are well toward the blue and others equally far toward the red.

Since I. forrestii and I. wilsonii contain yellow or yellows, I'm going to guess that we can look forward to some pretty bright red and pink blends, from the combination of the yellows with malvadin. We have already moved in the direction of orange- Jerry Flintoff's 40 (which is not a Cal-Sibe, despite my statement to that effect in the Jan. 1973 AIS Bulletin- I was quoted before I had a chance to correct my statemet) is really quite orange. My Cal-Sibe 'Pansy Eyes' is quite a respectable red, as was a sib; not all this color need be assumed to have come from the Californcae side. Conversely, I have seen essentially black I. chrysographes seedlings in which delphinidin surely predominates and all the other pigments may be absent. If we are short any type that would be useful it is whites among the 40s. I do have one rather sickly example, and I think there must be others around as hidden recessives, since Leona Mahood had a white Cal-Sibe from her I. clarkei.

The 28s of course have all kinds of great whites. Reds and pinks seem to be coming. And I am no end impressed by the fact that Currier has been able to upgrade the amount of yellow in his lines. I had always figured that we would have to cross the two groups to bring in yellow, and then would be handicapped by infertility. But this obviously is not the case. I might add here that one of my clones of I. sanguinea from Korea has some combination of pigments that gives it very red-lined hafts.

Fortunately the human eye is pretty sharp at picking out colors and we don't all have to become instant chemists in order to manipulate colors effectively.

(2¢ worth: I do wish that the Siberian Robins would report oftener on some of the interesting discussions that turn up, the comments on care and feeding of Siberians, reports of seedlings. We perhaps can't make use of every quote that comes in, at least not in the very next issue; still it would be nice to have some on hand to fill gaps at the end of a page, or to fill whole pages, as the case might be.

THE NAME BEHIND THE IRIS

From information supplied by Kevin Vaughn

Mrs. Wiswell's Siberian, Carrie Lee, was named for her mother, Mrs. Frank Nichols of Gardner, Mass. who celebrated her 103rd birthday last October. She seems to have had quite a lively career, and certainly a wide-ranging one in both time and space. In her early twenties, not long after her marriage, she left her native Provincetown, Mass. and wound up in Wisconsin when much of that state was unsettled wilderness. About the turn of the century she and her husband returned to the East and settled in Gardner. She remembers the first reports of the flight of the Wright brothers' first plane at Kitty Hawk, and was glued to the TV for last fall's moon landing. By contrast, her first trip to Boston was made by sailing ship. She has seen a lot of things come and go, and not many prettier than her namesake. Except perhaps her own reflection in the mirror. A newspaper picture of her shows a very pretty and lively old lady. I wish we could reproduce it here!

MORE NOMENCLATURE

Before the Report of the Committee came in in its final form I had received two short commentaries on the subject of nomenclature. While parts of these are made somewhat obsolete by that report, still there is matter in them which is worth printing here, so here are extracts from both Sarah Tiffney and Kevin Vaughn:

Sarah writes: For the sake of clarity and brevity I believe these (40 chr.) irises should have a common name which is brief, descriptive and, if possible, euphonious. I suggest the name 'Yunnan'...I find the following sources reported (from Dykes' Handbook, Wilson's 2-Vol. account of his Chinese explorations, notes I took 10 years ago in looking up the original descriptions of these species, and Jean Witt's fine account in the Fall, 1971, TSI):

I. forrestii- N. E. Yunnan
I. bulleyana- Yunnan and S. E. Tibet
I. delavayi- Yunnan, eastern Tibet, Tsangpo Gorge, Tali range
I. wilsonii- western Hupeh and Shensi, in western China
I. chrysographes- Yunnan and Szechuan in Western China, and China-Tibet border.
I. phragmitetorum- Yunnan
I. dykesii- possibly China (so vague as to be almost meaningless)
I. clarkei- Sikkim, Darjeeling (N. India), western China to Himalayas, Tsangpo Valley.

Observe that the center of distribution seems to be Yunnan. Szechuan adjoins the north border of Yunnan; Tibet adjoins the western borders of Yunnan and Szechuan; Hupeh adjoins the eastern border of Sze-

chuan; Shensi runs norhtward from Szechuan and Hupeh;...observe that Yunnan is the most frequently listed location above. From our present information, these irises are most common in Yunnan, and some occur also in neighboring provinces of China and in neighboring Tibet. I have no hesitation in concluding that Yunnan is the center of their distribution, and I think it would be entirely reasonable and in accordance with practices we are familiar with in other groups, to call them the Yunnan irises...

I. clarkei is a maverick...it is different from the others in more than location. It has a solid stem, a branched stem, and 38 chr. instead of a hollow stem, an unbranched stem, and 40 chr. Dykes stuffed it and I. prismatica in with the Sibiricae in spite of differences. My theory is, he was thinking about it when his wife called him to dinner. "Oh well, I'll just shove it in here", he said. We long ago took I. prismatica out; it obviously didn't belong. I. clarkei is closer; it is at least in southeast Asia, and it does cross freely with the others and make fertile hybrids, which in this case seems important- providing we have true I. clarkei. (..Incidentally I have found in my reading one reference to a 'hollow-stemmed' I. clarkei, in a British report, I believe.)

My somewhat captious statement above arises from a strong awareness of two basic problems with these irises. First, all we have were collected by a few men about 50 years ago; they have been growing in gardens ever since, and they cross freely; many of them by now must be hybrids, with more or less of the various species in them- and on the other hand I have grown some that look like the straight species, and in the absence of evidence to the contrary I would be inclined to accept them as such- but on any really critical question, I would not be too happy about it. The second problem is that the irises we now have from this vast, inaccessible, poorly explored region must be only a small number of the irises native there; the explorers who brought them back accomplished wonders, but they must, of necessity, have traveled only the main trails and collected along their edges in that wild back country. Until we have more complete collections I do not think we can go very far toward understanding their scope and relationships, and until the Chinese become so impractical that they will go around collection wild flowers, it seems unlikely that we will get them.

In the meantime, enjoy what we have.

And Kevin reminds us: ..with the advent of 'tetra-' and other mixed-up '-ploids' one is not sure of the chromosome counts. As a student of genetics I know the mixup generated by the loss or addition of a single chromosome in presumably pure-breeding stocks. When the hybrids of 40 and 28 are bred in future generations, the chromosome number will become even more confused.

PUBLISHED BY:
THE SOCIETY FOR SIBERIAN IRISES
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MASSAPEQUA PARK, N.Y. 11762

THIRD CLASS MAIL