

THE REVIEW

OF THE SOCIETY

FOR

JAPANESE IRISES

VOLUME 23

NUMBER 1

SPRING, 1986

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OF
THE SOCIETY FOR JAPANESE IRISES

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Slides Chairman	Mr. John Coble, 9823 E. Michigan Ave., Galesburg, MI. 49053	Tel. 616-665-7500

Resurrection...
so many times I've watched it, yet...
tamaracks in spring!

Robert F. Mainone



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BUSINESS ITEMS

The Review is published semi-annually by The Society For Japanese Irises. Editorial office is at 7979 West D Ave., Kalamazoo, MI. 49009. Deadlines for receiving copy are March 1 and September 1; earlier receipt of material is desirable. Black & White photographs and drawings are welcome; please put return address on the back if you want them returned. Reprinting is by permission of the writer and the editor, with due acknowledgement.

Dues are: Single annual, \$3.50; family annual, \$4.00; single triennial, \$9.00; family triennial, \$10.50; single life membership \$75.00. Dues may be sent either to the AIS Membership Chairman, or directly to The Society For Japanese Irise's Membership Chairman. (See address inside front cover).

Renewals: If your mailing label is marked with the expiration date 8601 this will be the last copy of "The Review" on your present membership. Please renew. If you have just recently sent in your dues, ignore the notice as there is an inevitable gap in passing along the information.

Address changes: Please notify the Membership Chairman.

Back issues: Copies of all back issues are available for a charge of \$1.50 per copy, including postage. In some cases there are no original copies available, but photo-copies will be provided at the same charge. Volume 1 (1964) consists of three issues, all subsequent volumes contain two issues each. Back issues should be ordered from the editor. Include a check made out to The Society For Japanese Irises in an amount to cover the number of issues ordered.

THE PRESIDENT'S LETTER

Dear JI Friends:

Once more we enjoy the excitement of another season of bloom not far ahead. I am writing this letter in early February in New York, where we are tending to family affairs and feel rather frustrated because, if I were in Maine, I would already be at work in the plant room putting the tetraploid seeds in their multipots under the lights and sprouting the diploid seeds in the Petri dishes for treatment with colchicine. I have a bumper crop of seeds to work with this spring and look forward to it keenly.

After the miserable experience of two years ago when I lost so many of my Japanese irises, I am very glad to report that last year when our new well provided, at long last, an ample supply of water, they flourished. It is one more documentation of the basic need of water if one hopes to grow JIs really successfully.

Those of you who receive our annual Seaways Gardens list know that last year our friend Shirley Pope joined forces with us, taking over the shipping part of the undertaking. As a result Elizabeth and I were free last fall to take a long anticipated trip to visit iris friends in England and West Germany. It was a lovely experience both because of the kindness of those friends and because of the opportunity to learn at first hand something of the progress being made with beardless irises in those countries. The popularity of Siberian irises clearly is increasing rapidly there, just as it is in the United States, but interest in JIs more slowly. Nevertheless, there are small groups in both England and Germany who are ardent admirers of them. It is my hope that we can foster their efforts. I have not seen Japanese irises in bloom overseas as yet, but from some of the reports I heard, plants which I have sent to English and German growers are performing extremely well.

As background for my efforts as editor of the book SJI will publish regarding Japanese irises, I have reread all of the issues of "The Review" since Volume 1 of January, 1964. It has been an extremely interesting and worthwhile experience and has filled me with admiration for the pioneers who brought our Society into being (Eleanor Westmeyer, Bee Warburton, Bob Swearingen and Art Hazzard) and for Eleanor who served as Editor for Volumes 1 through 3 and Bill Oueneel who started Volume 4 and continued for 18 years until he was relieved by Lee Welsh with the Fall issue of 1984. The wealth of information in the many articles published over the years will help enormously in the preparation of the new book. Indeed, the chief contribution of the book will be to bring what is known about JIs together, expand it a bit, bring it up to date, and make it readily available to the reader in a single volume.

Not long after you read this letter, the next convention of AIS will be held in San Jose, on April 26 to 30. I hope to see many of you there and especially at the Japanese Iris Section meeting (which will be held on April 27. We do not

yet have word of the time and room but that will be posted at the hotel). Do please arrange to come. The program at the meeting in Indianapolis last year was devoted to brief reports by "Eastern" hybridizers and especially "newer" ones less well known, perhaps, than those we have heard many times in the past. I hope to have a program of similar type in San Jose featuring the work of our Western hybridizers. Because of the dates, we will not of course, see Japanese irises in bloom - unless some of our enterprising members bring some from further south - but the slide presentations will show us many beautiful new flowers.

Word has been received from Bill Ackerman that the schedule of a contract which he has for consulting visits in Japan is such that he must be away this year, and the next three, at AIS convention time. Obviously, this would be incompatible with duties as SJI president. What might have been a difficult problem proved easy. Freda Hazzard, chairman of the nominating committee, reached all her committee members by phone and in less than 12 hours called me back with the recommendations you will see in a special nominating committee report in this issue. My thanks go to Freda for a wonderfully efficient job and to Don Delmez for his willingness to step into the breach. By 1987 Bill Ackerman can, subject of course to nominating committee action, return to the office of Vice President. I know we all envy Bill the great experiences he will have in Japan. His consulting is concerned with camilias rather than Japanese irises, but he will be in Japan at JI bloom time. What more could one wish!

Best wishes to you all.

Currier McEwen

PRESBY MEMORIAL IRIS GARDENS BEARDLESS IRIS REQUEST

The Presby memorial Iris Gardens, located in Upper Montclair, New Jersey, is a national historical landmark, established in 1927 in honor of Frank H. Presby of Montclair, a renowned horticulturalist and one of the founders of the American Iris Society. The collection of over 6,000 iris varieties annually attracts visitors to the garden from throughout the world.

Word is received from the gardens that they are planning to re-do the beds of Siberian, Japanese, and Louisiana Iris this year. The committee would appreciate hearing from anyone who might wish to supply named varieties of these iris types for this purpose. If desired, the committee is prepared to remit the cost of handling and shipping. They would like to hear from plant donors soon, as that will help them in planning the plantings.

If you are interested in supplying some plants for this purpose please contact:

Mrs. E. L. Harvey
Corresponding Secretary
1 Glenrock Rd.
Great Notch,
New Jersey 07424

SJI OFFICER PROFILES

Virginia Burton

Editor's note: As publicity chairman for SJI "Ginny" Burton has prepared the following two profiles for publication in this issue. Others will follow in subsequent issues of "The Review".

Our SJI President---DR. CURRIER McEWEN

Dr. McEwen bought his first irises (TBs) in 1954 and made the first crosses with them in 1956. He first hybridized hemerocallis in 1957 and siberian and Japanese irises in 1960. In 1960 he learned of the use of colchicine to induce tetraploidy in hemerocallis and started using it that year with siberian and Japanese irises, since they had never been known to change from diploid to tetraploid state in nature as had the TBs.

Currier introduced his first siberian in 1970, and his first JI in 1976. Since then he has introduced 22 JIs, 72 siberians and 32 hemerocallis, with both diploids and tetraploids in all three. Orville Fay was the first siberian tetraploid and Raspberry Rimmed was the first JI tetraploid to ever be introduced. He has won the Payne Award three times for his Japanese irises. Four of his siberians have won the Morgan-Wood Award and 1 daylily has won the Ida Munson Award for our busy president.

Dr. McEwen is presently chairman of the AIS Scientific Committee, past RVP of the American Hemerocallis Society for N.Y.-New England, past board member for AHS, past president for the Society for Siberian Iris, author of 2 books and 173 articles on arthritis, one book and about 30 articles on iris.

Prior to his iris involvement he attended Newark Academy, Wesleyan U. (BS 1923), N.Y.U. of Medicine (MD 1926), internship at Bellevue Hospital in N.Y. City, spent 4 years in Medical Research (now Rockefeller U.) in N.Y., in 1932 he became assistant dean and instructor in medicine at NYU, and in 1937 dean and professor of medicine in charge of teaching, research and patient care in the field of rheumatology. Dr. McEwen retired as dean in 1955 and as professor in 1970. During WW II he went to Europe with the Bellevue Hospital Affiliated Unit (First General Hospital), later becoming Chief Consultant in Medicine for the European Theater of Operations with rank of Colonel, Medical Corps.

We, the Society for Japanese Irises, are proud to have you as our president.

Our SJI Treasurer/Membership Chairman---CAROL WARNER

Carol Seabreeze Warner (Mrs. Andrew C. Warner) balances her time between her garden and her family. Andy, her husband, is an engineering test technician for Black and Decker. Carol and Andy have two sons, Andrew 14 and Jeffrey 12. They live

in upper Baltimore County, where they built their home in 1970 on 4½ acres of her parent's farm. Both sons have their own iris garden.

Carol graduated from the U. of Maryland in 1966 with a BS in Home Economics Education and taught Home Ec. for 5 years. She is presently a substitute teacher on the High School level.

Carol joined AIS in 1976, was vice president of the Francis Scott Key Iris Society in 1978 and president in 1979. She is an AIS judge and is now judges training chairman and beardless and species chairman for Region 4. If you think this "gal" doesn't keep busy listen to her other activities such as singing in the church choir, Little League Baseball involvement, AEROBIC DANCING, boating, collecting antique silver, and hooking rugs, to name but a few of her activities.

We, the Society for Japanese Irises are proud to have you as one of our officers.

JAPANESE IRIS POPULARITY POLL

"Ginny" Burton

Let's try the JI Popularity Poll one more year to see if we can get a better response. Would each of you please send me, by AUGUST 15, 1986, the names of the 10 JI you liked best this season? Please send them in order of your preference and I'll tabulate them for the Fall issue of "The Reveiw".

Thank YOU---

Mail to: Mrs. Wells E. Burton
210 Miller Drive,
Ladson, SC. 29456

SAN JOSE CONVENTION MEETING

Word was received after typing the President's Letter regarding the Japanese Iris Section meeting at the San Jose Convention. The meeting will be held on April 27 at 3:30 PM. in the Siskiyou Room of the Red Lion Inn.

JAPANESE BEETLE & ROSE CHAFER PROBLEMS,

A REQUEST FOR HELP.

Leland M. Welsh

Mrs. A. T. (Marion) Friedlander, of Fairfax, VA., writes that her area had a heavy infestation of Japanese beetles (*Popillia japonica*) last year. In describing her experience I quote the following: "The iris would no sooner be unfolded and the warmth of the day upon them, than the beetles would fly onto them and by evening would have eaten over half of the flowers.

I hand picked thousands of them and have spread the milky spore on the yard, but as yet have had little relief."

Upon receiving her first letter I questioned Marion if she was sure they were Japanese beetles, since we have had in the past, here in the Kalamazoo area, severe problems of the same kind with rose chaffers, and since "The Gardeners Bug Book", by Cynthia Westcott, Doubleday 1973, indicates that Japanese beetles do not seem to like iris but apparently rose chaffers do. She assured me that she does know her beetles, and they were *Popillia japonica*. Since then I have learned that some Japanese beetles were found on iris *ensata* here in the Kalamazoo area last year. Perhaps iris *ensata* is not their first choice of hosts, or could "The Gardener's Bug Book" have been referring to bearded irises and they do like beardless ones after all? At any rate, we have a problem, and as of now no good solution.

I wrote to some of the SJI board members and regular contributors for their suggestions. Of those responding, all recommended the milky spore. According to "The Gardener's Bug Book", it does take up to three years for the treatment to become fully effective. Perhaps Mrs. Friedlander simply needs to be patient, and wait a year or two for results, but in my mind there are still some questions. Bill Ackerman, wrote that in his area of Maryland there was a problem about 10 years ago, but many townships promoted control with the milky spore disease and now they are few and far between. In lieu of mass treatment how effective is treating the individual yard? Will the beetles simply fly in from the neighbors yard, or does the milky spore spread over a much wider area than that which is originally treated? Is the treatment permanent, or are regular supplementary treatments needed? And of course, I would gather that none of this affects the rose chafer!

Other suggestions were made regarding various chemical treatments. Again, if you spray the blooms, with most sprays you will ruin the appearance of the bloom. If it is a contact spray, it would require frequent spraying, as the beetles are constantly flying in from other areas. Some of the suggested materials to use were; Seven, Malathion, Cygon 2E and insecticidal soap. Of these I would suspect the malathion would be least damaging to the appearance of the bloom, but am only guessing as I have not tried it. "The Gardener's Bug Book" recommends Seven as a spray for Japanese beetle control on rose foliage but says it will not help on the blooms, it

recommends methoxychlor or carbaryl as sprays for the Rose Chafer. The book also suggests for the rose chafer using a temporary cheesecloth fence somewhat higher than the plants.

If any of you have knowledge or have had experience, (successful or otherwise) treating for either of these pests on Japanese iris we would like to hear about it. Information sent to me would be used as the basis for a continued report in the next issue of "The Review". I'm sure if you have a solution for Mrs. Friedlander's problem she would be happy to hear about it now, in time for this year's bloom season. Her address is: 5323 Kipp Court, Fairfax, Va., 22032.

PINK IRIS CLASSIFICATION IN JAPAN

Excerpts from correspondence
between
Mr. K. Sahin & Leland M. Welsh

A letter from Mr. K. Sahin of Holland (who had recently joined SJI) was forwarded to me early last summer by Carol Warner. In it a statement about pink irises caught my interest. I quote:

"I have received your 'Review' No. 1 of Volume 22. Very interesting indeed. But one remark:

All pinkish coloured Japanese Iris, regardless of form, shape or type are traditionally classified in Japan as belonging to the 'ISE' group. Therefore at least part of the Marhigo's 'MANON' Series should be classified as such.

As a youngster I spent much time in Japan with Japanese Iris scholars like Dr. Shuichi Hirao and Mr. Mototeru Kamo, who taught me these basics....."

In replying to Mr. Sahin about his request for back issues of "The Review". I took the liberty to write the following:

"Your comments about pink Japanese irises were noted with interest. It had been my understanding that "Ise" varieties had to be not only of delicate colors, but 3 petaled varieties with standards held at a particular angle to the falls. The large double "Higo" varieties with substance sufficient for use as garden plants certainly do not fit that category, do the Japanese still classify them as "Ise" due to color? There is now such a variety of colors and forms due to continued hybridizing and crossing between the various types, I wonder what standards for classification are still valid? Your comments regarding this, or perhaps an article for "The Review", would be most welcome."

To these remarks Mr. Sahin has graciously replied:

"I have called Dr. Hirao in Japan now, to establish what the current classification of pinks is in Japan and he tells me, that now there are pinks also in Edo and Higo (Kumamoto) Japanese Iris.

Most of these come from a very excellent pink Ise, named 'Otome' a variety raised by Dr. Tomino of Nagoya, whom I met with many years ago, from this variety 'Miyoshino' was raised by Mr. Mitsuda. These varieties contain some Paeonidin as pigment, which is quite a break. Now it is tried to select for Pelargonidin as a pigment in pink Japanese Iris, but that stage of clearness has not yet been reached.

At a tetraploid level this pigmentation is also inherited by 'Pink Triumph' (Walter Marx) and Prima Ballerina (Payne).

Also I understand, that several modern tetraploids in other colourings are no real improvements over the best diploid varieties, as raised by Dr. Hirao and Mototeru Kamo, and others."

I extend my appreciation to Mr. Sahin for checking on this and writing these interesting remarks. The comment about 'Pink Triumph' may prove of future interest as Dr. McEwen has written an article for "The Review" about that variety which is being held at his request for future publication pending some further investigation.

PHOTOGRAPHERS WANTED

With plans for publishing a book on Japanese Iris, the Society is in need of good photographs to use, especially of mature clumps, iris used in landscapes, perennial borders, with companion plants, and as accents. Please keep this in mind during the coming bloom season. Slides may be sent to the SJI Slides Chairman (John Coble)---address inside front cover. Pictures should be identified as to variety, garden, (or whatever is appropriate) and photographer. Photographs may be returned if desired.

A willow catkin
where winter had hidden it...
the spirit of spring

Robert F. Mainone

GERMINATION OF JAPANESE AND SIBERIAN IRIS SEEDS.

Robert Bauer

Raising iris from seed is a rewarding experience. Even if the flowers produced aren't worthy of registration, the expectation of new blossoms caresses the soul of any gardener.

After the work of pollination, collecting, storing, treating and planting the seed, transplanting the seedlings, and caring for the juvenile plants, blossoms become the "children" of the hybridizer. A good hybridizer must lose the maternal instincts and become a brutal judge of quality. Often a whole cross---perhaps four years of work---becomes compost. Normally a seed germinates in late spring, is transplanted and establishes itself by fall. The next year it may bloom, but more likely it will blossom the third year. With patience, a hybridizer will wait three to four years to see the first bloom of his crosses.

But patience and I have little in common. It seemed reasonable that if the seeds were germinated indoors in the winter and raised three to four months earlier than it's outdoor counterpart, the plants could be advanced an entire season. Early in December I dug up a batch of JI seeds planted in mid-October. The pot was brought in and put under fluorescent lights. Two weeks later, six little green leaves emerged, but two weeks later there were still only six plants. I knew there were over a hundred seeds in the pot; 6 percent germination was pretty poor. What happened? Why didn't the seeds germinate?

The next step: off to the University library to learn about germination requirements. I found one article on the germination of TB seeds and read several books on plant propagation. After the library study it was obvious that there isn't much published information on the germination of iris seeds---the seeds of apples, oranges, wheat and rice are far more important.

It seems that plant seeds have evolved with a series of germination inhibitors which try to ensure that the seed is in a favorable location and in favorable weather before it germinates. The seeds of Japanese iris are in capsules on tall stems. When ripe, the capsules split open from the top and mechanical action such as wind shakes them out over a small area near the mother plant. The papery outer coats of the seeds are very light and float in water which can distribute the seeds a great distance. Eventually the seed coats become saturated with water and disintegrate and the seed lodges in soil. This outer seed coat is a mechanical inhibitor: it prevents the seed from absorbing water which is the first step in germination. In temperate areas it is advantageous for the seed to wait out the winter in a dormant state and germinate in the spring. Many seeds have evolved which require a "moist-chill" period of several weeks. Inhibitors in the seed may prevent respiration by blocking oxygen uptake or prevent protein synthesis by blocking the necessary growth enzymes. These inhibitors are overcome

slowly, only if the seed is moist and cold. When warmth resumes, cell division takes place rapidly and the seed germinates.

Getting back to my pot of seeds unearthed in December, the seedlings were transferred to a flat, and the remaining 100 seeds were divided into four lots of 25 each. They were placed on moist sand in individual cups. One lot, a control, was kept at room temperature and the other three were placed in the refrigerator at 2°C (35°F). After ten, twenty and thirty days the refrigerated lots were brought to room temperature and for a week, each was heated to 40°C (150°F) for 30 minutes each day. Each lot germinated within seven days. The control seeds which had no refrigeration were then subjected to the heat treatments, but did not germinate. They were then refrigerated for 10 days on moist sand, and again subjected to the heat treatments. They then germinated just as quickly as the other three groups.

By now, late February, I was convinced that the seeds needed a cold-moist treatment. I dug up other JI and Siberian seeds that had been planted in October. When they were subjected to the heat treatments, germination was complete in 7-10 days. The Siberian seeds required 2 to 3 days longer heat treatment than the Japanese. The seeds had apparently broken dormancy over the extra winter weeks, and the seeds dug in early December apparently had not had enough time in the cold. The next step was to determine the length of time a "moist-chill" was required.

In May I obtained several pods of JI seeds which had been refrigerated dry for several months. The 400 or so seeds were removed and soaked for a week in water which was changed daily. The seeds had plumped to about four times their original volume. They were husked (so that the emerging radical could be seen easily) and divided into 12 groups. A control group of 100 was kept at room temperature and 11 groups of 25 were refrigerated. Every 7 days a new group was brought to room temperature and subjected to the daily half-hour heat treatment for ten days. After the 10 day heat treatment each group was returned to the 35°F for an accumulated total of 56 days and then again subjected to the heat treatment. The following table shows the results:

GROUP	DAYS AT 35°F		% GERM.	AFTER 56 DAYS TOTAL AT 35°F % GERM.		CONTROL AT 68°F DAYS % TOTAL GERM.	
1	0	2					
2	7	20		95		7	7
3	14	12		80		14	7
4	21	20		100		21	8
5	28	36		92		28	8
6	35	16		80		35	11
7	42	40		72		42	11
8	49	84		92		49	11
9	56	84		88		56	15
10	63	96		96		63	15
11	not tested						

In the group of seeds studied, 50-60 days "moist-chill" at 35°F was required for good germination.

The next fall, I discovered that JI and Siberian seed will not germinate if stored dry at 35°F, even for lengthy periods (100 days). After the cold-dry storage, the seeds were soaked for 4 days and subjected to the normal 10 day heating period. None of the seeds germinated.

In another experiment, it was found that the length of the initial soaking period should be at least four days. Seeds soaked only two days before a 90 day cold-moist storage showed only 40-50% germination. It was also found that seeds subjected to a cold-moist period in a temperature range of 35-45°F germinated as well as those stored at constant 35°F. Seeds began to germinate in cold storage, however, and some of them subsequently died.

A large quantity of JI seeds that had been stored at room temperature for 7, 8, and 9 years was obtained. The seeds were soaked for 5 days and given a cold-moist treatment for 70 days. Although the seeds plumped up as if in preparation for germination, not one of the three thousand seeds germinated. Apparently JI seeds do not store well. Eventually all of the seeds rotted.

There are at least two inhibitors to germination in Japanese and Siberian iris seeds. One of them is water soluble and can be leached out by soaking the seeds in fresh water for 4-5 days. A similar inhibitor has been found in TB seeds*, although leaching requires a considerably longer time. The second inhibitor is overcome by following the leaching with a moist-chill period at 35-45 F for 40 to 90 days. The results found in these studies agree favorably with those published by McEwen.**

Over the course of these experiments more than 100 specific crosses of Japanese and Siberian irises have been studied. The length of cold-moist treatment for good germination is apparently genetically controlled. Seeds from some pod parents seem to require shorter moist-chill periods than seeds from others. The seeds used in these studies were obtained from plants that have been selectively bred over a number of generations removed from their "wild" ancestors. Siberians are only a few generations removed from species, but with the JI, this selective breeding has been going on for hundreds of years. It is the usual practice for hybridizers to sow the seed in the fall and line out seedlings in the spring. Inevitably iris have been selected from seeds which germinate readily under these conditions. It is conceivable, for example, that plants hybridized in warm climates will be bred to form seeds which are less demanding in moist-chill requirements than those bred in more northerly areas.

For those who want to germinate seeds indoors, here are two methods. Harvest the pods early when they are ripe, but before they begin to crack. Seeds may still be green, but they should fall from the pods easily. Method one. Soak the seeds for a week in water, changing it every day. Treat the seeds for a half an hour with a solution of one part chlorox bleach in 8 parts of water. This will inhibit fungus. Rinse them thoroughly and place them on a moist medium. I have found that an inch of damp sand in a plastic cup works well. The top is covered with thin polyethylene and secured with a rubber band. Polyethylene allows oxygen through, which is

essential to germination, but prevents moisture from escaping. 'Saran'-type wraps do not allow oxygen through and should not be used. Store the seeds in the refrigerator for at least 60 days, checking occasionally that they do not dry out. The seeds can then be removed and germinated (see below). **Method**

Two. Plant the seeds immediately (without drying them) on ordinary garden soil, covered with a half inch of sand. The seeds may be isolated by planting them in pots or in cans with the bottoms removed (a tuna fish can is a good size). Fall and early winter rains will leach the seeds. About mid-February the moist-chill requirement should be complete and the seeds should be brought in, washed and placed on moist sand. Never let the seeds dry out. The seeds should be kept warm preferably exposing them to a half-hour of 85-100°F every day. After 10 days, the germination should be complete and in two weeks, the seeds can be picked out and transferred to flats in sterile planting mix. I find flats with 48 compartments to be best, 1 seed to a compartment. When each seedling is grown individually, there is little or no transplanting shock when setting them outdoors. Grow the seeds in a sunny window or under lights. When the seedlings are 3-4" tall, begin fertilizing with a dilute soluble fertilizer (1 tsp. per gallon of 30-10-10 or 15-30-15). Very young seedlings (1" and under) are injured or killed if fertilized. Always keep the potting mix moist. As the plants grow, they may need watering 2-3 times a week. The foliage, if it becomes a problem, may be kept trimmed to 10-12". Plant the seedlings out as soon as possible after the last frost. Seedlings exhibit tremendous vigor the first year and may have ten to twenty fans by fall.

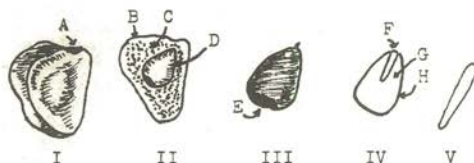
Germinating the seeds indoors and planting them out early gives the seedlings a good head start. About 85% of the Japanese and 75% of the Siberians bloom the following year. Seedlings can be evaluated and culled much earlier, and a lot of garden space is saved. Seeds must be germinated indoors, of course, if they are to be given special treatment such as inducing tetraploidy with colchicine.

*Arditti, J. and Pray, T. R., Dormancy Factors in Iris (Iridaceae) seeds. Amer. J. Bot. 56(3):254-259. 1969.

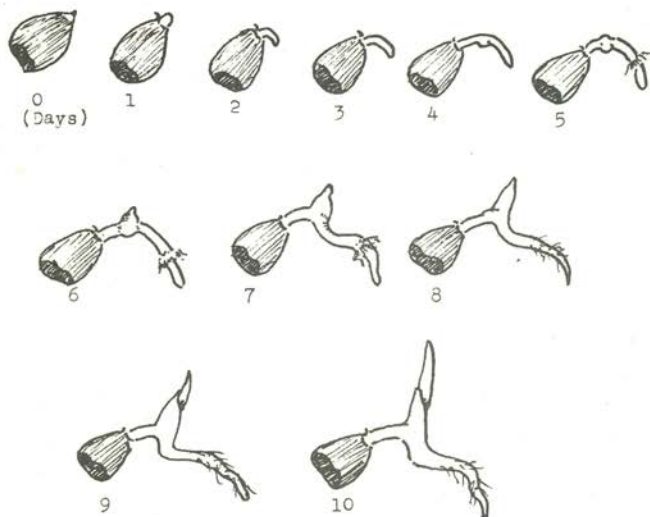
**McEwen, C., Factors Influencing Germination of Japanese Iris Seeds. The Review, Vol 10, No. 2, pg. 4, October 1973.

JAPANESE IRIS SEED

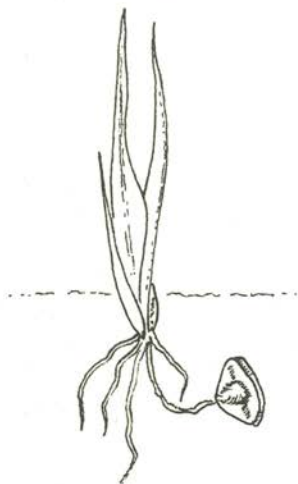
- I External
- II Internal
- III Seed, 4mm x 3mm
- IV Same, Interior
- V Embryo



- A. Point of pod attachment
- B. Exterior Coat
- C. Corky Layer
- D. Seed
- E. Point where outer coats attach to endosperm
- F. Embryo
- G. Hard, white endosperm
- H. Seedcoat



DEVELOPMENT OF JAPANESE IRIS SEED for the first 10 days after germination. On day 1 the radical is about $\frac{1}{2}$ mm long. On day 10 the first leaf is about 7 mm long. Grown at 20 C (65 F). Seed app. 4mm x 3mm.



JAPANESE IRIS SEEDLING.

About 40 days after germination, 5" above ground. Umbilicus from seed to plant varies from a few mm to 2 cm.

SJI SLIDES COLLECTION

John Coble - SJI Slides Chairman

Much to my surprise and pleasure, SJI does have a slide collection; thanks in most part to Bill Ouwenel and Arlie Payne. I knew that AIS had a slide program on Japanese iris, primarily supplied by Adolph Vogt. When I received the carton of slides from Gus Sindt, it contained the box with the AIS slide program plus---close to 300 slides, mostly of Payne iris taken by Arlie Payne himself. These slides became the property of Bill Ouwenel who has passed them on to SJI. Thank you Bill.

This is a tremendous beginning library for SJI of historical significance. Many of Mr. Paynes slides have personal notes written on the side, such as "typical form". Some of these slides with notes by the hybridizer have allowed the updating of other slides that were mislabeled. This could grow into a valuable identification library as well as a record library. Some of these slides may be sole representations of the cultivar---the cultivar now being lost from gardens or commerce.

There is a fair representation of Marx varieties and a small number of Hazzard cultivars. At least a half dozen other hybridizer's are also represented. I am asking for your help in building and completing our slide-library collection. This collection will also be a source of slides for color photos in our upcoming book on Japanese iris. Please help SJI with this work.

I believe it would serve the SJI well in the future if all hybridizers would please supply SJI with a slide of their new registered cultivars, say perhaps within one year of introduction. This would serve well in updating our slide-library for the future and would allow updating slide shows with what is new.

I have made up a new slide program recognizing most U.S. and a couple of Japanese hybridizers with representation of their cultivars. also included are some slides of landscaping and established clumps. All slides selected are sharp and in focus. This set is now available according to the new slide policy published in the January 1986 issue of the AIS Bulletin.

You can help SJI fulfill its Bylaws' purpose: "to foster the culture, appreciation, breeding and distribution of Japanese Iris" by offering to give a slide program to your club or other local garden group. How about one of next winter's meetings? We have the slides to help you; please use them and help SJI.

THE LESS THAN PERFECT GARDEN CULTURE

Donald Delmez

This is an article that will hopefully stir up interest in growing Japanese irises in somewhat less than perfect growing conditions. It was conceived from my first attempt to grow Japanese irises some six years ago. Living in an area of the United States (Missouri), where temperatures can be quite hot and with prolonged periods of dry weather, forced me to grow my Japanese irises in pools and containers.

It was soon apparent that I had too many cultivars to stay with growing them in containers. Consequently, I had to devise a bed in which to overcome the elements and problems of growing Japanese irises in less than perfect conditions. To add to the problems, my space is somewhat limited and there is considerable competition from neighboring trees and shrubs.

A bed was devised and dug, approximately four feet plus wide, and fourteen to fifteen inches deep. The hard pan clay soil and roots from neighboring trees and shrubs were all removed and disposed of. Then a layer of newspapers (several sheets thick) lined the trench to protect the plastic liner to be added next on top of the paper. A standard twenty foot wide roll of four or six millimeter plastic, clear or black, whichever you prefer, can be used to line your trench. Caution; your plastic will need to be doubled or tripled to protect your bed from encroachment from neighboring tree and shrub roots. The smallest pin hole in your plastic will be found by the root system of these plants.

Now is the time to begin to back fill your trench. A soil mixture was prepared by using a small amount of manure or compost and a good light humus top soil. The mixture should be thoroughly mixed and screened through a quarter or half inch wire mesh, if possible. If your soil is too coarse or lumpy it will tend to inhibit the root system which is essential for good Japanese iris growth. Caution; this is the best time to check the PH of your soil mixture. If you live in an area of high PH (6 or above), you can control your PH quite easily with this method of growing Japanese irises, which prefer an acid soil. You may add iron sulfate (and trace minerals) which will help in lowering the PH to approximately 5 to 5½. If you would like to raise your bed a few inches from ground level, landscape timbers work quite well and add a decorative touch.

Now that your bed has been lined with plastic and back filled with a good soil mixture, you may begin planting your Japanese iris. They may be planted somewhat closer together using this method, approximately fifteen to sixteen inches apart. It will be necessary to water your plants quite often during hot or dry periods because of evaporation in the soil. If you have used too much manure or compost in preparing your soil mixture, excess watering will tend to make your soil become stagnated. You can avoid this by removing a small shovel full of soil between your plants from time to time. A test for good soil condition would be to add earthworms to your bed. If the soil conditions are favorable, the earthworms will thrive.

In growing Japanese irises by this method, it has been my experience that they need to be divided more frequently. Every three years the entire clump should be removed and the soil replaced with a new, fresh mixture. To make this somewhat easier, I have divided my bed into three small sections. Consequently, under normal growing circumstances, I can replant one section of my bed each year on a rotating basis. This may sound like quite a chore but the rewards of growing Japanese irises to their perfection is worth all the time and effort you will put forth.

I'm hoping if you have had problems in growing Japanese irises in your area that you might try this method, or improvise one of your own that will work for your situation. Happy Gardening!

Editor's note: In talking to the SJI meeting at the Indianapolis convention about his growing method, Mr. Delmez noted that due to the high temperatures in his area at bloom time (often 100 or more degrees) the light shade from the surrounding trees is beneficial to the blooms.

SHIPPING JAPANESE IRISES

Virginia Burton

Some where--some day, we all need a workshop on mailing JI. Some irisarians have asked me to discuss it. In 1985 I received a package of iris with a fat grey worm nestled in the roots. Please wash the roots and inspect them before sending them out as you all know each one of us have our own critters, without importing them. One person received iris with dirt caked on the roots and the outer foliage browned--please. Still another received iris that had been in the mail 4-5 days with no holes in the box and they arrived here in South Carolina in 90 degree temperature, the outer foliage was mushy and smelled. Often when this happens it is impossible to save the iris. Do not put foliage that is wet or diseased in a mailing carton. Dry the foliage and wrap the roots/rhizome with a moist towel and place it in a plastic wrapper and tie it securely just above the rhizome--do not include the foliage in this wrapping.

Find a firm box for mailing. I know you have, and so have I, seen a pkg. marked Special Handling and the PO flings it clear across the floor into a bin. Send your pkg. by the fastest means. I believe we all would be willing to pay a bit more and receive our iris in first class condition. Thanks for listening.

INHERITANCE OF WHITE FLOWER COLOR IN JAPANESE IRIS

William L. Ackerman and Susan Bentz¹

Breeding and development of Japanese Iris *I. ensata* (*I. kaempferi*) has been an important part of our overall plant improvement program of plant introductions brought into this country from abroad by the U.S. Department of Agriculture. Hybridization within this species has involved the development of new floral forms and colors, extension of the blossoming season, increase in the longevity of individual flowers, and development of dwarf and short stem forms. In addition, it has been our purpose to study certain aspects of the inheritance of specific genetic characteristics. Since *I. kaempferi* is a diploid species ($2n = 24$ chromosomes) it is more amenable to the study of genetic inheritance than polyploid species, for example, the tetraploid Bearded Iris.

Over the years, we have documented plant and flower descriptions of all parents and seedling progeny of controlled crosses. Several attempts have been made in the past to sort out genetic information from the descriptive data on hand, but the physical manipulation of the large volume involved made it impractical except for a few very simple calculations. Our recent access to computer analysis has provided a means not previously available. This article is our first presentation of what we hope will be a series depicting the mode of inheritance of certain specific genetic characters for which we have documented information.

Although the basic floral color range of Japanese Iris is limited to white, purple, blue, red, and violet, their intricate blending and shading makes a study of their inheritance complex. While some self colors may be said to be expressions of single pigment factors, many are blends consisting of one color overlaid upon a different ground color. These may be expressed as marbling, speckling, or dusting, of one color upon another which when viewed from a distance, give an impression of a different color, hue, or shading effect than those of the actual pigments involved.

This complexity of variation is undoubtedly controlled by a series of genes, some of which are alleles² to each other, while others are inherited through completely separate sets of genes. To be practical, any study of flower color, must, of necessity, start with the most simple of relationships and proceed to the more complex after certain basic assumptions are established. Thus, we have chosen to begin with the genetic inheritance of white flower color in relationship to that of all other colors.

1. Research Horticulturist (retired) and Horticulturist, respectively, U.S. National Arboretum, Wash., DC. 20012
2. Allele - one of two or more alternate forms of a gene occupying the same locus on a particular chromosome.

If white flower color is genetically dominant to any or all other flower colors present among Japanese Iris, then it should appear in both the homozygous³ and heterozygous⁴ condition. If this were true, then when white-flowered individuals are selfed (fertilized with their own pollen), then those which are homozygous will produce only white-flowered progeny, while those which are heterozygous will produce progeny segregating for whites and other colors. If controlled by a single set of genes, the ratio will be 3 whites and 1 other color progeny. If, on the other hand, white flower color is genetically recessive to other colors, then white flowered individuals are all homozygous and either selfed or crossed with other white-flowered parents, will produce only white-flowered progeny.

As shown in Table I, flower color of 157 progeny from 17 white-flowered parents which had been self-pollinated produced 148 white-flowered and 9 non-white progeny. Similarly, 64 progeny from white-flowered parents crossed with other white-flowered parents produced 61 white-flowered and 3 non-white progeny. This extremely low percentage (12 non-whites among 221 progeny) of non-white progeny does not correspond with any recognized genetic ratio and is undoubtedly due to contamination by unwanted pollen from non-white individuals. When 307 progeny of 14 non-white flowered parents (thought to be homozygous from progeny analysis) were observed, 297 of these were non-white and 10 were white. Here, of course, it was expected that there would be no white-flowered progeny. Like before, this extremely low percentage does not correspond with any recognized genetic ratio and must be attributed to human error. This may occur anywhere from the harvesting and planting of the seeds, growing young seedlings lined out on greenhouse benches to eventual field planting. When 353 progeny of 15 non-white flowered parents (thought to be heterozygous from progeny analysis) were observed, 269 of these were non-white and 84 were white. Here we expected a 3:1 ratio if the presence or absence of pigmented flowers was controlled by a single set of genes. This is very close to a perfect 3:1 ratio (which would be 265 to 88). All 22 progeny of a non-white flowered parent (thought to be homozygous) were non-white when it was crossed with a white flowered parent. This was completely as expected provided the non-white is dominant over the white-flowered gene. Lastly, when a non-white parent (thought to be heterozygous) was crossed with a white-flowered parent, approximately equal numbers of (71) non-white and (74) white-flowered progeny resulted; closely corresponding to the expected 1:1 ratio.

3. Homozygous - having identical alleles at one or more genetic loci (genes).
4. Heterozygous - having different alleles at one or more genetic loci (genes).

The results shown in Table I and discussed in the above text demonstrate that non-white vs. white flower color in Japanese Iris is controlled by a single set of genes in which the non-white character is dominant and the white recessive. Apparently, this gene acts quite independently of the genes which control the various non-white colors (lavender, purple, violet, blue, etc.) and could be likened to an on-off switch, wherein if one or both genetic alleles carry the factor for pigmented (non-white) flowers, then the resulting flower will be some color other than white, but if neither allele carries the factor for pigmented flowers, then the flower will be white. Thus, white flower color is recessive to all other colors in Japanese Iris.

TABLE I

CROSSES THAT ILLUSTRATE THE INHERITANCE OF WHITE AND
NON-WHITE FLOWER COLORS

Parental Crosses*	White (aa)	Non-White (AA or Aa)	Total	Expected Ratio
White (aa) Self	148	9	157	1:0
White (aa) X White (aa)	61	3	64	1:0
Non-White (AA) Self	10	297	307	0:1
Non-White (Aa) Self	84	269	353	1:3
Non-White (AA) X White (aa)	0	22	22	0:1
Non-White (Aa) X White (aa)	74	71	145	1:1

*All color phenotypes

White (aa) - absence of pigmented flowers.

Non-White (AA & Aa) - having pigmentation in flowers (purple, blue, red, violet, etc.).

SUMMERVILLE IRIS SOCIETY - 1986 JAPANESE IRIS SHOW

Virginia Burton

The SIS in cooperation with AIS will present their 7th standard JI show May 31, 1986, 12 Noon to 8:00 PM at the Cuthbert Community Building, 101 W. 5th St. S., Summerville, SC.. Admission is free and entries are open to the public. The show theme is "Designing With Iris". Show chairman is Mrs. P. R. Black and co-chairman is Mrs. W. Niedrich. Committee chairmen are: Design entries, C. B. Rowland, 113 Laurel Ave., Goose Creek, SC. 29445, ph 553-1168 (reservations for space should be made with him by mid May); Judges, Mrs. J. B. Hale for JI and Mrs. W. E. Burton for design and cut horticulture (companion plants to JI); Hostess, Mrs. D. McCoy; Entries and classification, C. B. Rowland and Mrs. R. L. Thompson; Clerks, Mrs. H. Mitchum and Mrs. J. Morris; Auction items, Mrs. W. Schneider; Auction assistants, Mrs. T. B. Brooks and Mrs. Schneider; Friday evening buffet, Mrs. Brooks and Mrs. Niedrich; Publicity, Mrs. Burton; Show schedule, Mrs. Black; Cut hort. placement, Mrs. A. Darriand; and Cut hort. entries, Mrs. Thompson.

Horticulture, JI and design classes may be entered May 30, 8pm-9pm and May 31 7am-9am. No entries may be removed from the show floor before 8pm May 31. Containers for JI will be furnished. Containers for cut horticulture, division 2, must be furnished by the entrant.

AIS certificates, Rosettes, and medals, plus silver will be given, if merited, to top winners in Division 1 (cut iris). The J. B. Hale plaque, AIS Rosette, and silver will be awarded to the best JI seedling. Silver will be given to the best cut horticulture specimen in Division 2. Silver and an AIS Rosette will also be given to the best design entry.

This is a cultivar show. Each variety constitutes a different class and is to be judged as such. There is a class for container grown JI and a class for iris other than JI all in division 1. Division 2 is for companion plants for Japanese irises: Cl. 1, annuals, a. specimen, b. 3 of a kind; Cl. 2 perennials, a. specimen, b. 3 of a kind; Cl. 3, Roses 12" stem, a. specimen (1), 2/3 open, (2), fully open, b. climber (1), single stem, (2), spray, c. cluster type (Seven Sisters, etc.); Cl. 4 Miscellaneous cut plant material, grown primarily for foliage--3 leaves or 3 stems of the same plant; Cl. 5 Ivy 12-30", a. small leaf, b. large leaf.

There will be 4 entries in each of the 5 classes in design division 3, all to be done in the creative manner. Cl. 1 "Welcome Home", entrant to furnish card table, exhibition table setting with 1 place setting and decorative unit; Cl. 2 "Simple Elegance", a pedestal design staged against the wall (medium brown), to be viewed from the front only and the top measurement is 16"x30"; Cl. 3 "Reflections", 36"high x 30"wide frames to be covered with material by entrant (frames furnished); Cl. 4 "Beauty", novice class for those who have never won a blue ribbon in a design division--pedestal design (conditions same as cl. 2); Cl. 5 "Tomorrow", (conditions same as cl. 3).

There will be 2 hours of judges training on Japanese irises at the JI Test/Display Garden at Joe and Elsie's garden, 306 E. Doty Ave., Summerville--time 5pm-7pm, May 30, followed by a buffet at the show building at 7:15pm. Breakfast will be at the show building 7:15am-9am May 31 and the bus will leave at 9:20am (approx.) for Meadowlake Gardens to see their extensive JI and hemerocallis planting. Lunch will be served in their garden. On the return to the show building an auction will be held, supper and program. Games and prizes all day.

Registration fee for the weekends activities is \$25.00. A check should be made out to Mrs. C. B. Rowland, and mailed to her at 113 Laurel Ave., Goose Creek, SC. 29445, ph 553-1168.

Hotels and Motels near by are Econolodge 875-3022, Holiday Inn 875-3300 (both at 17A and I-26) and Hamilton Motel 873-0220 (near show building).

SUMMERVILLE IRIS SOCIETY - GUEST IRISES FOR 1987 MEETING

Virginia Burton

28 named varieties of Japanese Irises were received last fall (1985) as guest irises for the Society for Japanese Irises' Mini-Convention in 1987. They are: Blue Marlin, Whiting, Burbot, Purple Marlin, Striper, Ling, Continuing Pleasure, White Parachute, Sky and Mist, Royal Fireworks, Lasting Pleasure, Lavender Krinkle, Wine Ruffles, Oriental Eyes, Little Snowman, Dace, Dark Enchantment, Evening Tide, Taffeta and Velvet, Violet Vase, Double Cream, Eternal Feminine, Double First, Immaculate White, Oriental Royalty, Arthur Hazzard, Caprician Butterfly and Far East Caprice. Also received were 20 seedlings under number.

Those sending Japanese Iris plants were: Dr. Ackerman, Adolph Vogt, Caprice Gardends, George Bush, Jill Copeland, Jimmy Copeland, Calvin Helsley, John W. Wood, Anna Mae Miller and Dr. McEwen.

As our "JI Test" garden now contains both recently named and seedling Japanese irises, we are changing the name to JI Test/Display Garden, and hope this meets with everyone's approval. Plants will be labeled under number with the hybridizer's name, or under the registered name. If a JI was sent to us under number in the fall of '85 and is now named please let me know so I can change the label to its newly introduced name, and it can be judged as a named variety.

JI placed in memory of Arthur Hazzard, by his wife Freida, at Swan Lake Iris Garden, near the bench donated by the Society for JI, are: Prairie Chief, Pr. Snow, Pr. Twilight, Pr. Bluebell, Pr. Velvet, Pr. Glory, Pr. Forbeta and Violet Spectacle. These will be viewed in 1987. Also in the Sumter, SC. garden of Col. and Mrs. Hugh Knight to be viewed in 1987 (and in 1986 at the Knight's convenience) are: Blue Marlin,

Whiting, Burbot, Purple Marlin, Striper, Ling, Arthur Hazzard, Continuing Pleasure, White Parachute, Sky and Mist, Royal Fireworks, Lasting Pleasure, Lavender Krinkle, and Wine Ruffles. The rest will be on view in the Summerville Area, 1986-1987.

The Summerville Iris Society would like to thank you who sent JI for the 1987 meeting. The response was "super", but then iris folks are the best.

NORTHEAST APOGON AUCTION

Jan Sacks---Marty Schafer

The NORTHEAST APOGON AUCTION will be held August 17 this year. Last year's auction was not only a great success but a good time for everyone who came. We were able to send \$1000 to The Society For Japanese Irises - more than ever before. In addition, \$700 went to SSI, \$350 to SIGNA, and \$60 to LISA (a first time contribution). Many, many people in our area donate time and irises to make the auction happen. Bee Warburton, Currier McEwen, and Ken Waite brought their newest intros and their slides brought many oo's and ah's. We were also very fortunate to have contributions from outside the northeast. Thank you to Dot Rogers, Hal Stahly, Joan Cooper, Louise Bellagamba and Adolph Vogt. The slides these friends sent of their contributions significantly increased the bidding.

Once again this year we encourage people from around the country to send contributions to our auction. We must receive the irises before August 17. Please send slides if you have them. They will be well cared for and returned. If you wish to send irises or attend our auction contact Marty Schafer and Jan Sacks, 45 Elm Street, Bedford, MA 01730 (617-275-7723).

HARRISBURG, PENNSYLVANIA---BEARDLESS IRIS SHOW.

Area XI of Region 3 of the AIS will hold its 6th beardless iris show on June 21, 1986. Location for the show is the Harrisburg East Mall at Harrisburg, Pennsylvania.

There are horticultural sections for all types of beardless irises, but Japanese usually predominate. It is a cultivar show and includes a seedling section. Awards are given for best of show, four Queen's court runners-up, and best seedling. All growers are invited to exhibit. In addition to the show, there will be a sale of surplus bearded iris rhizomes.

Anyone interested in exhibiting or attending and desiring more information may contact Mrs. Ophelia Straw, R 1 Box 89, Clarks Valley, Dauphin, PA. 17018.

SOME MISCELLANEOUS JI OBSERVATIONS - 1985

Currier McEwen

Although none of the following observations would warrant a separate report, I trust they may be of some interest as a potpourri. I will start with a most unfortunate experience. I have written before of the losses of my Japanese irises due to lack of water followed by a harsh winter in 1983. Among those lost were all of my Pyne-winning Raspberry Rimmed, which I had foolishly lined out that fall as single divisions. Naturally I was eager to start with it again and Anna Mae Miller kindly sent me four divisions of it from the plant I had sent for the Kalamazoo "mini-convention". I had been having some minor problems with Botrytis infection in my half acre of Siberians and was treating them with a witches brew of Benlate, Captan and Maneb. This had worked well in eliminating the signs of Botrytis and had been well tolerated by the Siberians - although one batch which was forgotten and left soaking for three hours was badly hurt. There had been no evidence of Botrytis in the Japanese irises but for no better reason than the fact that a bucket of the fungicide mixture for the Siberians was there, I soaked the four divisions of Raspberry Rimmed in it for an hour. It killed every one! I tell this embarrassing story simply to point out that apparently Japanese irises are more susceptible to damage by the mixture I used than are Siberians. If I use such a bath in the future, I shall merely dip the plants in the solution for a minute or two and no longer.

My other two observations are happier. The first concerns the time required by Japanese and Siberian irises to reach subbicient maturity to bloom. In 1985 I counted bloom in these two groups in the seedlings planted in the spring of 1984. Forty-four percent of some 200 Japanese iris seedlings bloomed that second year, compared with three percent of 352 Siberian seedlings. I had previously had the impression that second year bloom is more likely in the JIs but had not expected the difference to be so striking.

My third observation concerns continuous, repeat and rebloom. I shall not define these terms here since my use of them is discussed in another article in this issue. I do wish to describe the behavior of one of my seedlings: 80/165. This plant, from a cross of seedlings going back four generations to that excellent repeat bloomer, Garden Caprice, and another repeater from mixed seeds sent to me by Dr. Hirao in 1963, had been treated with colchicine and had proved to be a sectorial chimera with about four fifths of the clump diploid and a small section partly tetraploid. In 1984 I had marked it for watching because it continued to send up new stalks for more than four weeks. This it did again in 1985, with its first bloom opening on July 9th and the last fading on August 8th. To my surprise three new stalks on this 4 year old plant appeared successively in September with bloom starting again on September 11th. All three stalks of that trio had 3 branches plus terminal and 8 to 9 buds and were still blooming when I left on September 26th for Europe as mentioned in my Presidents letter. Those 3 stalks were on the diploid part of the clump, but before I left a new stalk was emerging from the

tetraploid portion. I did not see its bloom but a friend who took pictures of it for me reported that its last bloom closed on November 3rd. The flower, although a pleasing velvety dark blue-purple, is not outstanding, and certainly it will not be introduced unless it continues to behave in this fine fashion.

I have cited it to illustrate the blooming potential that must be a challenge to the hybridizer to exploit. This behavior is not unique. Indeed, I have mentioned it twice before in the "Review" (Vol. 14, No. 2, Pg 20, Oct. 1977 and Vol. 15, No. 2, Pg. 3, Oct. 1978) and there have been other reports also. It is certainly unusual, however, and it is useful I think to be reminded that it can occur and is something to work toward. Of course I am anxious to see how this plant will behave in 1986. Perhaps it may have bloomed itself to death! I'll report another time.

CHECKLIST CORRECTION

Tender Trap - should read: (Hager, R. '64)---not (Marx).

INFORMATION REQUEST

William E. Ouweneel

Dr. Currier McEwen has asked me to write a chapter on the history of JIs in the US for the forthcoming SJI book on Japanese Irises.

I would appreciate any information on growers, hybridizers, gardens, etc, related to JIs before 1930, except the Swan Lake Garden, Sumter, SC. Send information to me at RR 31, Box 478, Terre Haute, IN., 47803.

W. E. Ouweneel



CONTINUING, REPEAT AND RE-BLOOM

Currier McEwen

In the spring 1983 issue of *The Review* (Vol. 20, No. 1, pp. 9-10) Bill Ouweneel has written an article on JI Rebloomers and, at the end, requested comments from readers, "especially from those who have used the term rebloomers." As one who has written five previous articles on this subject in *The Review* (1-5) as well as a number in the *AIS Bulletin* (6), and in the publications of *The Society for Siberian Irises* and the *Reblooming Iris Society*, I obviously am one who has used the term and respond to Bill's request for comments.

Bill Ouweneel's article is almost solely confined to the views of Dr. Raymond Smith and quotes extensively from his articles and correspondence. Dr. Smith is a pioneer in the development of remontant tall bearded irises, and has studied the phenomenon carefully and scientifically. On the basis of his observations on bearded irises, he has defined a reblooming iris as one that produces an extra period of bloom each year on bloom stalks arising from increases budding from the rhizomes that flowered during the immediately preceding regular period. This definition has merit for tall bearded irises but is very restrictive, and has not been adopted by the *Reblooming Iris Society*, which accepts as a rebloomer any iris which has a second period of bloom, whether soon after the first or after a period of months, and whether the new bloom arises from a rhizome of the same generation as those that produced the first bloom or from new increases from them.

I have adopted the definition of the *Reblooming Iris Society* on the principle that they are the authoritative organization for making such decisions, and also, because their definition obviously is less restrictive and, especially in the case of Siberian and Japanese irises, more practical. Indeed, if one were to insist on Dr. Smith's definition, there could be few if any rebloomers among Japanese and Siberian irises, in spite of the fact that there are many which have a second, and some with even a third period of bloom.

It is essential to understand clearly that there is a very marked difference in the timing of rebloom in Japanese and Siberian irises compared with that in bearded irises. In the latter, second bloom usually occurs several months after the first, whereas in the case of Japanese and Siberian irises the second period usually starts only one to three weeks after the last bloom of the first period. The shortness of this "rest period" can very easily result in its being missed by growers accustomed to rebloom in tall bearded irises. Because of this, and hoping to emphasize this different behavior of Japanese and Siberian irises, Bee Warburton and I (7) have proposed the terms repeat bloom and repeat bloomers or repeaters for use with these beardless irises. Furthermore these irises vary in their capacity to repeat. On the basis of my observations in my own garden over the past ten or more years, I believe that all Japanese and Siberian irises fall into one or another of the following five categories with regard to rebloom. First, of course, is the largest number which do not repeat or rebloom. Second, is a moderate number that may show a few repeat blooms in some years but not

regularly. These, which I call occasional repeaters, are, I suspect, the ones referred to as stragglers in Bill Ouweneel's article. Third, is the group that can be expected to repeat every year if growing well and in which performance at repeat is similar to that of the first period. I have referred to these as reliable or dependable repeaters. Fourth, is the relatively small number in which the performance at second bloom is superior to that of the first, with taller stalks and better branching and bud count. This group, which I call preferential repeaters, includes such Siberians as My Love, Placid Waters, Soft Blue, Lavender Bounty, Welcome Return, Exuberant Encore and others, and probably, the Japanese repeaters Purple Parasol and Maine Chance. Finally, there is an extremely valuable group which have no second period of bloom following a pause but which continue to send up successive stalks for distinctly longer than the usual period of bloom. I call these continuing bloomers. This category is especially valuable in Japanese irises. Indeed I have found it difficult to be sure whether a given Japanese cultivar is a continuing or a repeat bloomer although the distinction is readily made in Siberians. The difficulty in the case of the JIs is due to their mass of stalks and leaves at the base of the plant which makes it difficult to be sure whether there was a short period of no new starting stalks or whether they were there but hidden in the foliage. Actually, of course, the distinction is rather academic.

To refer back to Bill Ouweneel's article, let me quote his final paragraphs as follows:

"It is suggested that when a JI blooms after the normal blooming season it be described according to one of the following three classifications.

First, if it does not bloom after the normal season several successive years...that it be termed a straggler or some similar term.

Second, if it blooms several successive years and the rhizomes producing the blooms are of the same generations as those which produced the regular spring bloom, that it be called a late bloomer.

Third, if it blooms several successive years and the rhizomes producing the blooms are of the generation following the generation that produced the regular spring bloom, that it be called a rebloomer."

I shall discuss each of these three proposed categories in turn. As regards the first, I have some question about the term "normal season" and would prefer "usual". Normal implies that the later bloom is abnormal, but surely the second bloom of the reliable and preferential repeaters is normal for them and very desirable. In that paragraph, Bill suggests the cultivars of his first category be called stragglers or some similar term. I prefer the term occasional repeaters. Stragglers sounds to me somewhat derogatory whereas these occasional repeaters are showing a tendency toward a very desirable trait.

My principle objection to Bill's term "late bloomers" for his second category is that this term has been used for years for cultivars that start to bloom late as opposed to the early and mid-season ones. Their period of bloom is about three weeks. In contrast the repeat bloomers are almost invariably ones that start very early, have a usual period of bloom and then bloom again. The examples I can cite are more striking in Siberians. The usual period of bloom is two or three weeks. My preferential repeater Lavender Bounty has, in my garden, bloomed for 8 weeks four years in a row, and Exuberant Encore has bloomed 10 weeks, with those periods of bloom interrupted for only a week or so between first and second bloom. My continuing or repeat blooming Japanese irises similarly extend the season of bloom but not yet so dramatically.

Bill's third category I have already discussed. If Dr. Smith's definition were to be used, there are few if any Japanese and Siberian irises which would qualify. The seedling 80/165 discussed in my other article in this issue possibly does, but I do not know whether the bloom in late October came from the parent rhizome or an increase. In the case of the bearded irises with their rhizomes on the surface, Dr. Smith can rather easily tell, but with the JIs one would have to dig down an inch or two to try to find out and, unless a fairly extensive excavation were made, one still might not be sure.

I will make one more comment regarding Dr. Smith's definition. In several places Bill Ouweneel refers to that as the strict one. That implies, perhaps, that a less strict one is inexact or even incorrect. To me, Dr. Smith's definition is strict in terms of his views of rebloom; it is restrictive in terms of the definition used by the Reblooming Iris Society. When Bee Warburton and I proposed the term repeat bloom instead of rebloom for Siberian and Japanese irises our purpose was to emphasize the different behavior of rebloom in them compared with that of the tall bearded. After reading Bill's article I think that our term may have merit also to anyone who wishes to accept Dr. Smith's definition and still recognize the obvious fact that second periods of bloom occur in Japanese and Siberian irises.

My efforts at prolonging the period of bloom in these irises has been directed toward the development of more with a good second period of bloom. Meanwhile we have all been impressed with Bill Ackerman's success in developing Japanese irises with blooms that last 4 or 5 days instead of the more usual 2 or 3. He and I have discussed a term that might be suitable to describe this phenomenon. Hemerocallis growers have long used the term extended bloom for cultivars with flowers which stay fresh well into the evening hours instead of deteriorating in the late afternoon. Bill Ackerman agrees that this term may be useful in describing the longer bloom of the individual flowers that he is working for - perhaps extended floral bloom.

In closing, I must emphasize that the observations that I have made in this article are based on experience in my own garden in Maine. I know that plants which have been reliable and preferential repeaters in my garden year after year have

performed less well in some other places. More needs to be learned about the factors which account for these differences.

Clearly, however, the trait is largely under genetic control and I am confident that it can be increased. The ability to continue to bloom abundant lovely flowers for weeks after their non-repeating cousins have finished is a most desirable characteristic. Further development of the trait deserves the best efforts of our hybridizers.

References

1. McEwen, C.; 1972 Rebloomer Report.; The Review. Vol. 10, No. 1, pg. 6, April 1973.
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6. ----Experience with Rebloom in Siberian and Japanese Irises.; Bull. American Iris Soc., No. 233:7377, 1979.
7. ----A Choice of Terms for Remontancy in Siberian and Japanese Irises.; The Siberian Iris, Vol. 5, No. 7, Spring 1983.

MISSOURI AND DENVER BOTANICAL GARDENS

Harry B. Kuesel

Both the Missouri Botanical Gardens, and the Denver Botanic Gardens have Japanese gardens designed by Professor Koichi Kawana. They are completely different in that the former is a large garden covering many acres, while the latter is a small intimate garden whose focal point is a stream leading up to a Japanese Tea House. Both gardens are constantly improving and I suspect are receiving new Japanese irises every year. Professor Kawana told us that a Japanese Garden takes at least ten years to mature, and that Americans are generally too impatient and want instant gardens, which cannot achieve the serenity that comes with maturity.

IRISES ON JAPANESE POSTCARDS

Harry B. Kuesel

One of the most popular methods of communication in Japan is the postcard. In 1981, the Japanese Government decided to authorize the Japanese post office to issue a series of postcards with commercial advertising in an artistic design called a cachet. This was done to avoid increasing the postage rate with 35 yen being the cost of the card and the additional 5 yen charged to the advertiser. Twenty nine cards were issued the first year, and 50 or more each year since then. About three companies a year have chosen to use irises in their design and most of the time these irises are the Japanese type. The card below shows an advertisement by Ibaraki, a first day cover maker. The design shows some blue Japanese irises growing under a bridge with a lone figure poling his boat in a pond beyond.

These postcards are called "ECHO" cards. The EH in Japanese means picture, and KO means advertisement. Hence the name "ECHO".

Anyone desiring further information about these cards can get it from Kenneth R. Yarnell, Box 13189, Portland, Oregon 97213.



I. ENSATA - IN OR OUT OF WATER

This article was written by Mr. Philip Avery of England, and published in the Newsletter of The Siberian Spuria and Japanese Group B.I.S.; Newsletter No. 18, February 1986. It is reprinted here with acknowledgement and appreciation to the S.S. & J. Group.

"I find this exchange of views interesting and helpful, so here is my contribution, based on my limited experience, over the past ten years. This has been supplemented by timely practical guidance from Dr. Shuichi Hirao, who sent me brief notes and a collection of seeds to encourage me. To add to this an acquaintance in Japan, very generously sent me a collection of *I. Ensata* and an extensive set of slides of Japanese Irises in Parkland and Pool Settings.

Dr. Hirao in his authoritative and world-wide renowned book 'The Japanese Iris' writes... 'A frequent misconception concerning the Japanese Iris is that it is a bog plant and that flooding is necessary in its cultivation. In Japanese Iris gardens running water is to be seen when the flowers are in bloom, which creates the mistaken impression that the Japanese Iris grows in water, but in fact the water is there for its aesthetic effect, and flooding is not necessary'... Several transparencies in my possession illustrate this point, which has always influenced me in my treatment of this species... It is important to note that in the above extract, Dr. Hirao is referring to *I. Ensata* (syn. *I. Kaempferi*)...

Angela Marchant in her booklet 'Irises for the Water Garden', written for the B.I.S., says of the true aquatic:- 'Although a number of Species are found growing under water in the wild, only one of these, *I. Laevigata*, might fail, in this country, unless grown under water'....

Dr. Bowden in his Thesis, comments that recent experts on the Genus *Iris* have concluded that the two Species of *Iris* (*I. Ensata* and *I. Laevigata*) are quite distinct.

I believe that all the above statements hold good to-day. The question then arises 'Why grow *I. Ensata* in water'.. If it is not essential to the plants' survival, what other reason have we? Certainly growth in water with heavy feeding and surface mulching of the container, gives noticeably improved vigour and bloom, but this could be achieved by careful treatment, if the plant is grown in suitable location in well prepared garden soil. Mrs. Frances Love in her article (N/L No. 17 July 1985) has described how specific requirements can be met in her New Zealand garden...

Although I practice Hydroponic type cultivation of some *I. Ensata* plants, I try to limit the depth of water in which the container is immersed to between 1/4 and 1/3 of the depth of the compost in which the plant is growing... In late Autumn such containers benefit from being plunged in free-draining soil, in a sheltered location and covered with bracken or peat... not STRAW! until they are lifted again in the following April... The conclusion I have reached is that the real justification for growing *I. Ensata* in water is that delightful 'mirror' effect that a lake-side, or pool setting can give the blooms, in other words the 'aesthetic' effect..."

BASIC CULTURE for JAPANESE IRISES

Leland M. Welsh

It is sometimes suggested that we need to include basic material for the benefit of the new member who may not yet be very familiar with the growing of Japanese irises. The following summary of Basic Culture has been prepared for inclusion in welcoming letters sent out by the Membership Chairman to new members. This summary is a revision of one originally prepared as a hand-out for a talk on Japanese irises at the 1985 Region 8 fall meeting. It is included here in hopes that some members may find it useful.....

Japanese irises will grow successfully in ordinary garden conditions or the perennial border. They do require ample moisture, especially up to bloom time. They will do very well beside a stream or a pond but in cold climates they do not like to have their feet in water during the winter. Perhaps no other irises are influenced to as great a degree by culture as are the Japanese. Good culture will increase height, branching, flower size, and quantity of bloom. Japanese irises will grow and bloom better if planted in full sun.

Soil Requirements: Japanese irises prefer a heavy, rich soil, with ample organic matter. If the soil is clay, the addition of organic matter will help to loosen it, if the soil is more sandy, the organic matter will help in water retention as well as adding nutrients. Depending on what is available, till in an ample amount of cow manure, hay, straw, peat moss, etc. If using hay or straw you may need to add a high nitrogen fertilizer to compensate for the nitrogen tied up in the decomposition process. The soil PH should be slightly acid, ideally between 5.0 to 6.5. (1) There is evidence that Japanese irises will tolerate a wider PH range, but growth and bloom will not be as good. If the PH is too high the leaves will turn yellow. If your PH tests above 6.5, it can be lowered by the addition of granular ferrous sulphate, aluminum sulphate, or agricultural sulphur.

Planting: Plant strong divisions of at least 2 to 3 fans. Small divisions take longer to get started and are more subject to loss. The roots should at no time be permitted to dry out during transplanting. The rhizome should be planted 1 to 2 inches deep, depending on heft of soil. If planted in a depression of 3 to 4 inches, the depression will help to catch and hold more moisture. Since new roots form above the old roots, if you wish to maintain a clump in one spot more than 3 years, planting in a depression will permit the gradual filling in of soil and help to maintain the plant's vigor for a longer period of time. After planting keep well watered until the plant is established. In the spring if rainfall is not sufficient, give extra water until bloom time. The equivalent of 1" of rain per week will keep them doing well in most soils.

Time of planting: Japanese irises can be transplanted almost anytime from spring until fall, but shortly after the bloom period is probably best. This gives the new roots sufficient time to anchor the plant before winter freezes.

Mulching: After planting, a heavy mulch of 2 to 3 inches is beneficial. Oat straw is recommended. The mulch helps to conserve moisture as well as reduce weeds. If plants are set out in the fall a mulch is needed to prevent heaving over the winter.

Fertilizing: Japanese irises are heavy feeders. A liberal application of a balanced fertilizer, such as 12-12-12, in spring and just before bloom is beneficial. Weak plants showing light green foliage will be invigorated with a bi-weekly foliar and drench application of miracid.

Pests: Iris borers and other insects can be controlled with the application of Cygon 2E, mixed at the rate of 2 tablespoons per gallon of water. Apply when spring growth is about 4-6" high and again a few weeks later if borer problem is severe.

(1) There has been a question raised about PH as high as 6.0 being satisfactory. I find there is variation among references as to the recommended PH range for Japanese irises. There also appears to be variation among varieties of Japanese irises as to their tolerances. It may also be possible that various soil conditions may have different optimum PH ranges for Japanese irises. If any readers have information or insight on this subject, your input would be of interest for a future article in "The Review".

KALAMAZOO AREA JAPANESE IRIS SHOW

The Southwestern Michigan Iris Society will present its 12th show of Japanese irises on Saturday, July 5th, 1986. Location will be at "The Crossroads", in Portage, Michigan.

Theme for the show will be "Good Feelings", with classes in creative design based on the theme. Horticultural divisions of the exhibit will include sections for seedlings, Japanese iris cultivars, and cultivars of other late blooming irises. Entries will be received from 8:00 to 10:00 A.M. the day of the show at "The Crossroads". The show will be open to the public from 12:00 noon to 8:00 P.M.

Anyone with seedlings or cultivars to exhibit, or an interest in seeing the show is encouraged to participate. Further information may be obtained by contacting the show co-chairmen; Mr. & Mrs. Carl Gacon, 8619 East "ML" Ave., Kalamazoo, MI. 49001 Tel. (616)343-1133.

Editor's "REVIEW"

Perhaps the greatest reward of being editor is the opportunity to correspond with, and sometimes meet, many of the society members. Certainly the highlight for 1985 was to finally meet and talk with Bill Ouweneel at the Indianapolis Convention. This year it has been to meet and have breakfast with Mr. K. Sahin of Holland, as he passed through Kalamazoo on a trip to the U.S.

Those who forwarded comments (few in number) about the change in format, were favorable. Thank you for your nice comments. It seems to be working out successfully, and efforts will be made to continue refining it. An effort is being made to get this issue out earlier than my stated schedule because of the earliness of the San Jose Convention. I expect the same will be true next year for Phoenix.

My gratitude is extended to the several people who supplied articles of substantive nature for this issue. It is nice when people willingly supply good material, and on time too! I hope in the future we will be hearing more from Dr. Ackerman on genetics as he continues to computer analyze his large amount of data from Japanese Iris hybridizing.

The correspondence from Marion Friedlander has made me wonder if some form of question and answer, or inquiry, column might be of interest on a regular basis. If you have questions, items you would like to see written about, or answers to questions posed, please forward them. Let's see what comes of it.

Spring is now approaching. Plans are being made to attend the convention in San Jose. Everyone, of course, is looking forward to the new bloom season. I hope it is a good one for each of you. Do send me your reports on it, what was good and what left something to be desired, varietal comments, gardens visited, what's new. I will be looking forward to hearing from you.



Upside and downside
in the water's still mirror...
green blades of spring

Robert F. Mainone

NOMINATING COMMITTEE---SPECIAL REPORT

111 Winston Drive
Williamsburg, VA.
February 19, 1986

Dr. Currier McEwen
Box 818
South Harpswell, ME 04079

President: Society for Japanese Irises

Dear Currier:

The Nominating Committee wishes to submit the following report due to the resignation of Dr. William L. Ackerman, Now serving as Vice-President.

Vice-President:

Mr. Donald Delmez
3240 Connecticut
St. Charles, MO 63301
Ph. (314) 724-4274

Board of Directors:

Dr. William L. Ackerman
P.O. Box 41
Ashton, Maryland 20861

Both Mr. Delmez and Dr. Ackerman have been contacted regarding the foregoing offices.

The Nominating Committee for 1985

Freda B. Hazzard

Freda B. Hazzard, Chairman
Robert Bauer
Dr. Harold Stahly

NOTICE:

If further nominations are not received by time of the Board Meeting in San Jose, April 27, 1986, the above nominated officers will be considered elected to begin serving immediately for the unexpired term of each respective office. That is: Vice-President, end of 1986; Director, end of 1987.

SOCIETY FOR JAPANESE IRISES

Financial Statement

January 1, 1985 - December 31, 1985

CERTIFICATE OF DEPOSIT

Original deposit 12/7/84	\$2,000.00
Interest 12/7/84 - 12/7/85 at 9.75%	<u>204.79</u>
TOTAL reinvested 12/7/85 at 8%	2,204.79

MONEY MARKET SAVINGS ACCOUNT

Donations:	
9/2/85 S.W. Michigan Iris Soc.	2,000.00
9/10/85 Northeast Apogon Auction	1,000.00
Life Memberships (Rockwell & Welsh)	150.00
Interest 9/2/85 - 12/31/85	<u>67.81</u>
Balance on hand	3,217.81

CHECKING ACCOUNT

Balance on hand - January 1, 1985	923.36
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Income:

Dues	675.00
Checklist Sales	222.00
Sale, Back Issues <u>REV.</u>	29.50
Donations:	
talks by McEwen	125.00
A.H. Hazzard Book Fd.	25.00
Interest on Checking	<u>55.51</u>
Total Income	1132.01

Expenses:

Spring REVIEW	568.89
Spring REVIEW reprint	14.00
Postage (Membership Ch.)	24.20
Fall REVIEW (Welsh)	125.20
Fall REVIEW (Foreman)	<u>335.90</u>
Total Expenses	1068.19

Balance on Hand in Checking Account - Dec. 31, 1985	\$987.18
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TOTAL CASH ON HAND 12/31/85	\$6409.78
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Respectfully Submitted,

Carol S. Warner

Carol S. Warner, Treas.