

THE REVIEW

OF THE SOCIETY FOR JAPANESE IRISES

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Vol. 8, No. 1 April, 1971 CONTENTS Officers, Nominating Committee and Appointments From the President's Desk W. A. Payne Efforts to Induce Tetraploidy in Japanese Irises The Japanese Iris in Australia Today 12 Treasurer's Report, December 31, 1970 14 OFFICERS President Mrs. Troy R. Westmeyer Vice-President Mr. Frank B. Foley, Davenport, Ia. Secretary Mr. Ronald F. Miller, Kalamazoo, Mich. Treasurer Mr. Ford L. Grant, Davenport, Ia. Directors at Mrs. Edith Cleaves, San Jose, California Large Mrs. J. A. Crist, Franklin, Ind.

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Mr. W. E. Ouweneel, Terre Haute, Ind., 1971 through 1973 Mrs. J. E. McClintock, North Olmsted, Ohio, 1971 and 1972 Mrs. Vay B. Sargo, Hot Springs, Arkansas, 1971

APPOINTMENTS

Mr. W. E. Ouweneel, Editor and Publications Chairman, Terre Haute, Indiana

Mr. E. H. Wagner, Columbus, Ohio, Robin Chairman

FROM THE PRESIDENT'S DESK

Spring seems to have taken a very long time in coming to New England this year. The weather is still cold and the rainfall has been minimal. News photographs of the drought in Florida and Texas are frightening. We certainly hope that crops and flowers will soon have the needed moisture. In view of the threatening spread of the drought, it would be most wise to mulch heavily this year to preserve what we have.

The Japanese iris can be quite perishable, as many of us have learned to regret. In addition to mulching, another wise precaution for saving choice plants is to spread them out. Instead of having just one clump of each named variety, grow a second clump in a different part of the garden and share your surplus with a friend or two. Then you need fear no catastrophe.

Our new officers have taken over now and I am most pleased with their cooperation and enthusiasm. V.P. Frank Foley has graciously arranged his affairs to take charge of our meeting at the convention in Kansas City in my absence and will show slides which have not been used previously.

We are happy to welcome new members to our Society around the world. In addition to our many friends in Japan, our membership list now includes: Sir Peter Smithers of Lugano, Switzerland; Mrs. T. E. B. Poole, Jr. of Buenos Aires, Argentina and Miss Waltraud Busbach of Nuremberg, Germany. We have heard from interested gardeners in New Zealand and Poland--so we just might become a truly international Society if the love for Japanese irises continues to spread.

We are saddened by the loss of our dear friend and former director, Arlie Payne. His dedication to breeding Japanese irises and the beautiful introductions he named will continue to inspire us and remind us of a remarkable man. It was most heartwarming to receive a telegram from The Japanese Iris Society regretting the loss of our honored member and to know that he was so beloved both here and abroad.

It was most flattering to be "drafted" for a third term as your President. I shall need lots of help--for we still have many unresolved problems. First of all, our members are so far apart that it is difficult to have any kind of formal meeting. Secondly, stock of new, named varieties is still so small that few people are growing the same irises. Both of these factors make it difficult for AIS judges to evaluate bloom each year.

Many members have written to me expressing a sincere wish to get acquainted with other growers of Japanese irises. Our Robin program offers a fine opportunity to do just this. You can help us spread the interest by becoming involved with planting, showing and sharing your flowers. We need more shows, more propagators, more dealers, more public plantings and show gardens--and more auctions through which interested gardeners can get started with choice varieties.

My dream for this Society includes a doubling of our membership and many more benefits: an annual Show, tour of gardens and convention for just our Society--and wouldn't it be fun to include a visit to the Hammond Museum's Japanese Garden in North Salem, New York with lunch at Gasho in Central Valley, New York and then hop across the country to see Steve Moldovan's lovely oriental garden in Avon, Ohio--and then marvel at the way our members in Terre Haute, Indiana and Del Mar, California grow Japanese irises.

I cannot close without giving a special salute to Cloyd Sensenbach who was inspired by Arlie Payne many years ago to grow and develop his own Japanese irises and who travels many miles each year to see the newest varieties. The loss of a leg has not dampened Cloyd's enthusiasm one bit, so we expect to see him gardening again in spite of his misfortune.

* * * * *

W. ARLIE PAYNE

Arlie Payne, as he was best known, was born February 4, 1881, near Pimento, south of Terre Haute, Indiana. His mother died four months later and he was raised by an aunt, Mrs. Kate Citizen.

Born and brought up on a farm, he early learned the effort and the rewards of winning the fruits of the earth. At fourteen he left home to attend the Central Normal College at Danville, Indiana, where he graduated in 1899. He then returned to Terre Haute where he learned the pattern making trade in a foundry. Three years later he responded to an urge to go West and spent two years working in a California redwood lumber mill. Upon returning to Terre Haute he was employed by a photographer. Portraits he made a few years later show unquestionable skill in that occupation.

In 1905 Arlie arrived in Chicago to attend classes at the Chicago Art Institute. During the next five years he worked for a photographer there and met two persons who were to affect the rest of his life. One was Miss Clara Gaertner whom he married in 1908 and the other Dr. Cho-Yo who had been in charge of the Japanese Art Exhibit at the Columbian Exposition. During this time he started collecting Japanese ceramics and prints with Dr. Cho-Yo's assistance.

Probably in 1910 the Paynes moved to Terre Haute. After a short venture in real estate, Arlie returned to pattern making. It seems, however, that he already had an interest in flowers. In the November, 1964, issue of The Review, C. A. Swearengen reported that Arlie bought some bearded iris rhizomes the year he returned. A neighbor who grew peonies at that time says that about 1915 Arlie looked at them with interest and soon was growing and hybridizing them. By 1920 he was ready to give up pattern making and return to the soil to go into landscaping "as a means of personal expression." At that time he bought seventeen acres south of Terre Haute, built a home according to his own standards of excellence and durability and commenced business. He lived and worked here until old age forced him to retire in 1966.

Initially he engaged in residential landscaping. Although this required shrubs, vines and trees, his interest in flowers could not be set aside. He grew large quantities of peonies for plantings and cut flowers, potted numerous rose bushes each spring and, late in the 1920's, had a large planting of bearded irises. Arlie was RVP of Region 6 in 1931 and 1932.

What happened next is best described in the following quotation from Swearengen's article. "...in 1925 he had seen advertised in a catalog from the Hobbs Nursery at Bridgeport, Indiana, another kind of iris, the Japanese. Being of an inquisitive turn of mind and interested in anything comparatively new that could be used in perennial plantings, he ordered his first four Japanese irises. These included Uchiu and Mahagony, the latter still in commerce. His interest grew and in 1928 he bought ten more from the Flowerfield Plant and Bulb Co., then operated by Childs. In the same year F. B. Meade imported 20 varieties from Japan and started growing them in Fort Wayne, Indiana, In 1931, Mr. Payne, quite interested now in these beauties, wrote to Mr. Meade, then a Director in the American Iris Society, as to the possibility of acquiring some of these introductions. Mr. Meade mailed a folio of paintings that had been sent to him from Japan and from these six were purchased. Later a few others were added to his collection and from this group came the exclusively American strain so suited to our gardens. Like Topsy, this hobby grew and grew. Hybridizing 'was on' in earnest."

The six varieties mentioned by Swearengen probably were the six Edo varieties which were the principal foundation for all of his hybridizing. They were Aifukurin, Kongo San, Iso No Nami, Rhishono, Otomene and Asamaru Miyo. However Walter Buss, in the October, 1950, issue of the AIS Bulletin reported that Nishiki Yama, Sakuragawa, Shira Nami and Hinode Sakura were also included in the purchase from Meade. Twenty two other varieties were used over the years but to much lesser extent than the principal six.

Arlie's practical reason for switching from bearded irises to Japanese was that bearded irises bloomed when he was busiest with his spring landscaping and that Japanese irises fitted his seasonal load better. One feels, however, that he must have made the change with much anticipation because of his friendship with Dr. Cho Yo and his love for Japanese art.

His first crosses were made in 1932. In the next thirty years he had grown about 100,000 seedlings, number 1349 and register 170. One year he produced 7,500 seedlings. All seedlings were bloomed a minimum of three years before final judgment which meant that he had on average about 10,000 seedlings blooming each year. His first seventy-five introductions averaged 5.7 years in trial beds.

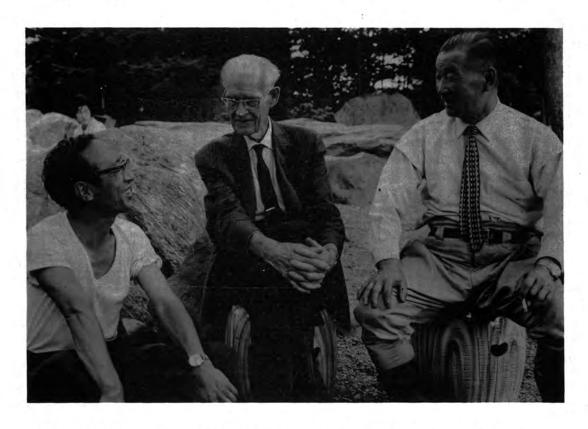
In a letter in the International Japanese Iris Robin dated January 27, 1964, Arlie looked both backward over his active career and forward as he wished he could have continued it: "More than thirty years ago Japanese iris became my hobby which in later years developed into a full-time occupation though by no measure a wholly commercial enterprise. At my age, now eighty-three, I am happy to say I am more enthusiastic than ever and am grateful to find it possible to still carry on my gardening activities though not so extensively as in former years. Having grown Japanese iris for several years previously, mostly for my own enjoyment, my breeding program had its beginning in 1932. It was, to no little extent, due to the importation into the U.S.A. a few years before this of a collection of later originations of Edo origin, which were superior to Japanese iris heretofore seen in our country. The progeny from crossing a few of these varieties into European and American varieties which over the years had proven rather reliable growers, formed the basis of my breeding line. From the beginning my breeding experiments have been carried on almost exclusively by intercrossing in a systematic manner seedlings from these original crosses. Only in recent years a few Higo varieties have been crossed with this closely inbred line and now clones carrying more or less Higo parentage are among my introductions, the first two having been registered in 1962. There seems little doubt that the most promising of our American varieties in the immediate future lies in the infusion of Higo parentage.

"This program over the years has resulted in eighty introductions which, with the exception of four that were directly from the original crosses, are the product of a well established, closely inbred line and represent not only an authentic strain but, inasmuch as they are particularly adapted to our climate, cultural conditions and requirements, it is my belief that they really constitute a race of Japanese iris which is distinctly American.

"Although there may be varieties among my former introductions that are superior in some respects, as a whole none are more distinctive than my registrations of last season which I believe in general are the more important because of their potential value for breeding purposes." He then described and evaluated Venetian Velvet, Immaculate Glitter, Wounded Dragon, Windswept Beauty and Night Blizzard.



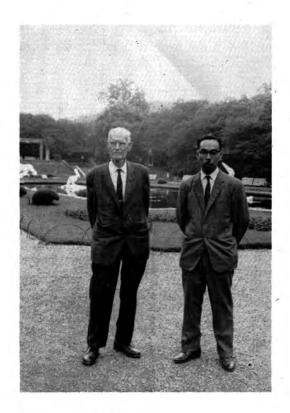
Arlie Payne with his medals. Reading from left to right: Three from Hamburg, AIS Hybridizer Medal and two from Vienna. Taken in 1965.



Left to right: Dr. Shuichi Hirao, Arlie Payne, Mr. Kuribayashi



Left to right: Arlie Payne, Yoshio Mitsuda and Dr. Shuichi Hirao



Left to right: Arlie Payne and Dr. Kozi Tomino



Left to right: Arlie Payne, G. Ushido and Dr. Shuichi Hirao

Continuing he said: "The Japanese iris has made great strides over the last fes years. Hybridizers are originating more vigor and better-growing clones as well as adding to their former beauty. Now people are taking up their growing and are learning the Japs are not as difficult as they had been led to believe. As fine as they presently are, however, there are vast possibilities of improvement which probably to a great extent will be accomplished sooner than we think. To all appearances, baring a world disaster, we are on the threshold of phenomenal developments in Japanese iris."

In the 1960's international honors came to him in recognition of his hybridizing success. Upon invitation he prepared a paper on Iris kaempferi for the First International Symposium on Iris held in Florence, Italy. The same year he entered 48 of his varieties in competition with 198 others in the Internationale Gartenbau Ausstellung at Hamburg and won the Gold, Silver and Bronze Medals with his Blue Nocturne, Fashion Model and Orchid Majesty respectively. A year later he won the Silver and Bronze Medals at the Vienna Internationale Gartenschau with The Great Mogul and Confetti Shower respectively. The same year, 1964, he was awarded the AIS Hybridizer's Medal. Upon invitation of the Japan Iris Society he spent seven weeks in Japan during the 1967 blooming season as their guest, following the bloom from south to north.

He believed that his best varieties were Immaculate Glitter and Wounded (rhymes with rounded) Dragon. Close to these were The Great Mogul, Red Titan, Blue Nocturne, Confetti Shower, Cobra Dancer, Danseuse, Enchanted Lake, Fall and Frost, Fashion and Fancy, Ivory Glow, Memorial Tribute (in memory of Mrs. Payne), Miss Simplicity, Popular Acclaim, Scherzo, Sky and Water, Spirit Lake, Strut and Flourish, Vintage Festival, Violet Splendor, Mulberry Splendor, Western Symphony and Silver Surf. He thought Miss Coquette his best miniature. His international correspondence supports these choices.

From the beginning of Arlie's hybridizing he kept a perfect record of every cross. He knew the ancestry of every seedling going back to the varieties he purchased. The record on each seedling was maintained until it was plowed under. For each registration he drew a breeding diagram showing ancestors, dates of crosses, dates of registration and honors. Specimens may be seen in the October, 1965 and October, 1966, issues of The Review. He used Ridgway's Color Standards and Nomenclature in his color descriptions. His well-worn field notes, a complete set of his breeding diagrams and his analyses of his breeding results were given to the AIS Historian in 1969. In 1970 his medals followed.

In 1967 he established the AIS Payne Japanese Iris Award. It is a silver vase ten and one-half inches tall, five and three-fourths inches wide at the mouth and engraved with a figure of his Swirling Waves. He won the award in 1968 with his Dancing Waves.

Arlie Payne was a meticulous and discriminating man searching for an outlet for his aesthetic instincts in every creative thing that he did. It mattered not whether he was making a photographic portrait, a wooden pattern in a foundry, collecting art objects, landscaping or hybridizing. No effort could be shirked. He had to use the best tools, the best materials and the best workmanship. To do less would have been to be dishonest.

He died February 13, 1971. His friends will remember him as a quiet but warm and friendly person. He loved natural beauty and the arts in all their forms. His life was devoted to adding to the beauty he enjoyed and shared so willingly with everyone else.

The following telegram dated February 24, 1971, in Tokyo was received by Eleanor Westmeyer: Society For Japanese Irises, Mrs. Westmeyer -- The Japanese Iris Society deeply regrets the passing away of honored member Mr. Payne. Amen.

EFFORTS TO INDUCE TETRAPLOIDY IN JAPANESE IRISES Dr. Currier McEwen

As everyone today knows, the genes are the submicroscopic units of cells which control inheritance. It is less generally known that the genes are contained in structures which can be seen with a powerful microscope and which are called chromosomes. The cells of every naturally occurring plant originally had two sets of chromosomes - one from each of the two parents - and such cells and the plants they make up are called "diploid," meaning two-fold. During the passing of ages some plants have spontaneously doubled their number of chromosomes and these are called "tetraploid," meaning four-fold. How this has occurred in nature is not known but in relatively recent years it has been discovered that the phenomenon can be induced by man through the use of a substance called colchicine, a drug derived from the autumn crocus which has been used in medicine for over 2000 years and is a specific for acute attacks of gout. This has been of great interest to scientists and to plant breeders because experience has shown that when flowers occur in nature in both the diploid and tetraploid form (as, for example, the tall bearded irises) the latter is always superior, with larger flowers, better substance and richer color. Let me add that this is not a mutation in the modern sense. In a true mutation a chemical change occurs in one or more genes. With colchicine the individual genes remain as before but are doubled in number. Hence the plant remains basically as it was in the diploic state but with the enhancement of its feature noted above. One more definition and I will be finished with these biological details. Rather often a plant treated with colchicine is only partly converted and hence is part diploid and part tetraploid. To these, the biologists have given the name "chimera" after a mythical Greek creature which was part lion and part horse.

This is not the place to describe the details of various methods for using colchicine. They can be read elsewhere (1-3). Suffice it to say that when one treats the just-sprouted seeds, as Mrs. McEwen and I have done, they grow well for about 4 to 6 weeks and then 50 to 90% die. Of the survivors, 10 to 20% will be tetraploids or chimeras. We have limited our efforts to daylilies and Siberian and Japanese irises (with a few spurias thus far) all of which are among the great number of plants which have not spontaneously been transformed into tetraploids in nature. Let me say at once that our success with Japanese irises has been meager compared with that which we have had with daylilies and Siberians and this in spite of the fact that we started with all three flowers at the same time in 1960 when we learned the technic from Orville Fay.

Aside from technical difficulties in using colchicine we have encountered two main problems in our work. The first is that even when one succeeds in inducing a tetraploid or a chimera it may not be fertile; and when fertile chimeras are crossed only the diploid part may set seed with the result that only diploids appear in the next generation. The second problem is that the seeds one starts with must be healthy and not infected with fungi because they must be germinated on moist filter paper in sterile covered dishes (Petri dishes) and are even more susceptible when they start life in that way than when planted in soil.

In the case of daylilies we made rapid progress because they rarely die of fungal infection during sprouting and because known pure tetraploids were already available through the work of Fay and Griesbach, Traub and Buck. Hence we could cross our chimeras with them and know that any seeds resulting would be pure tetraploid also. But in the case of the Siberian and Japanese irises both problems had to be overcome. Since there were no existing tetraploids to help us we could cross only our colchicine induced tetraploids and chimeras. In the case of Siberians

we finally succeeded in 1969 in getting second generation tetraploids; so now future work with Siberians is relatively easy. In the case of Japanese irises, however, we have obtained no complete tetraploids and only a few chimeras; and when the latter have been crossed only diploid seeds have resulted thus far.

The second problem, namely that of unhealthy seeds, has also been a major stumbling block. With the Siberians this has been a moderate difficulty but with the Japanese irises an extremely serious one. For example, out of 19 batches of seeds obtained from planned crosses in 1969 and germinated on filter paper in March 1970 only one batch remained healthy and could be treated with colchicine. All the rest died of infection (fungal, I presume, although bacteria or viruses may conceivably be involved also) before they ever reached a stage suitable for colchicine treatment.

Having stated some of the problems let me briefly report on results to date and on our further plans. Our best Jap chimera-best in the sense that it was far more tetraploid than diploid - came from some bee pod seeds kindly sent to me by Mr. W. A. Payne in 1962. It was a "peppered" reddish-violet in color, of compact vigorous growth and about 3 feet tall. It bore both diploid and tetraploid flowers which permitted direct comparison. The tetraploid ones were larger, had wider segments, much better substance and richer color than the diploid ones. Since I had no other tetraploid cultivars to cross with it I could merely self it, and over a two year period obtained only diploid seedlings. Then unfortunately I divided it and lined it out in late September of 1969. That winter here in Maine was bitterly cold with little snow cover and all were lost.

During the 1970 season four new chimeras were noted among the plants from seeds harvested in 1966 and 1967. All were better than their diploid sisters but, to our regret, all were poor chimeras from the breeders' standpoint, that is, more diploid than tetraploid. We crossed them, of course, and have harvested seed to plant this year but I will be very pleasantly surprised if any tetraploids result.

Our efforts at treating sprouted seeds with colchicine in 1970 also were disappointing because, as mentioned before, only one batch of seeds out of 19 remained uninfected during the sprouting period in the Petri dishes. Hence we could treat only one batch of about 100 seeds. Of these only 20 survived, of which 7 had the appearance of having perhaps been affected. These were treated so late in the season that I dared not plant them outdoors. They have spent the winter at 34 degrees in our plant room. On January 24th we turned on the heat and lights and as I write this in early February all are alive and growing well. Time will tell whether there is a chimera - or hopefully a tetraploid - among them. Possibly this season will reveal some in the garden among plants which did not bloom last year; we hope so and will have the answer in July.

Meanwhile we will start in the Petri dishes this March some 1300 seeds from 23 planned crosses made last year. At the suggestion of Fitz Randolph these were dusted with Arasan before they were stored in the refrigerator and it is our hope that this may result in many more healthy seeds this year and give us a good number to subject to colchicine. Again, time will tell. Also this year we will try the "clonal" method of treatment (1, 3) in some larger plants to see it if will be effective with Japanese irises. Finally may I say that, though disappointed, we are not discouraged and will keep trying! I will report again in a year or two if anything of interest develops.

REFERENCES

- 1. McEwen, C.: Tetraploidy in Siberian irises. Yearbook of the British Iris Society. Page 77, 1966.
- Griesbach, R.A., Fay, O.W. and Horsfall, L.: Induction of polyploidy in newlygerminated hemerocallis seedlings. The Hemerocallis Journal 17:70, 1963.
- 3. McEwen, C.: Methods for inducing tetraploidy. The Siberian Iris, 2:286, Oct. 1968.

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DR. HIRAO'S BOOK

The following information on Dr. Hirao's book on Japanese irises is taken from his letter of November 11, 1970, to W. A. Payne and one to the Editor dated January 14, 1971.

The book will be titled "The Japanese Iris." It will be published by The Asahi Press, 1-1 Yurakucho, Chiyodaku, Tokyo, and is scheduled to be released early in June of this year. It will be printed in a Deluxe Edition 25.7 cm. x 36.4 cm. (10 in. x 14 1/4 in.) and consist of 119 leaves color-printed on one side. The reverse side of each leaf will be blank. About 70 varieties will be printed full size, one per page. About 40 varieties will be half-size and about 250 in smaller sizes. Of these about 130 will be Edo varieties, 40 Ise varieties, 130 Higo varieties, 40 American varieties and two German varieties. Description will be in Japanese and English. The cost will be 23,000 yen or about \$64.00.

THE JAPANESE IRIS IN AUSTRALIA TODAY

PART I Robert Raabe - New South Wales

For many reasons, the Japanese Iris is rarely grown in Australian gardens. Less than 2% of the continent is environmentally suitable for their culture and these restricted zones are not uncommonly subjected to adverse weather conditions. A crescent shaped strip extending coastally from central New South Wales south to Melbourne and into western Victoria is the main potential growing area but lack of water is a constant problem through at least one season of the year. Japanese Iris growers must be prepared to work for success and accept disappointments.

Here in Sydney, Iris kaempheri does well if its basic requirements are met. Rainfall averages 47 inches per annum with a rapid grading off as one moves inland. Only 30 - 35 inches normally fall on my garden which is only 18 miles west of the city. City water has a normal ph of 7.5 and is quite readily acidified if soil conditions are right. Soils vary from quite acid to neutral naturally and can easily be modified for Japanese Iris culture with minimum effort. Sydney is often referred to as the Azalea City, testimonial for its predominantly acid soil. Native trees in the area are mainly eucalypts and their decaying leaves and bark have a definite acidifying nature. In western suburbs, many recently established in areas once used to grow market crops for the city, gardens have long been without natural bush. These rolling areas are covered in rich soil which only has to be acidified to create ideal Japanese Iris conditions.

Winter temperatures are sufficiently low to induce dormancy (Louisianas, for instance, grow the year around!), although removing dead foliage in Autumn must be done carefully to avoid damaging the new growth tips which are often several inches high and concealed in the bases of the dead fans. If cut to a 6 inch high stubble, these tender shoots are protected from frost damage until Spring growth commences in September or even late August. We unfortunately lack a 'normal' weather gradient from Winter through Spring and into Summer and Spring months (September - November) are often erratic periods of cool (50° maximum) days and heat wave (over 90°) conditions. Blistering heat can be a problem at bloom time but tall eucalypts are usually sparsely leaved and the filtering effect is ideal protection for the iris beds. My bloom period extends from mid-November until Christmas time with several seedlings exhibiting remontant characteristics and blooming again in February or March.

I have not heard of any disease attacking Japanese Trises but a few persistent pests must be controlled. The new Spring growth is palatable to slugs and snails and aphids usually appear later in the season. I often notice thrip and small black beetles in the bloom but rarely in sufficient quantity to be alarming. Refusing to use systemic sprays in my garden has retained a reasonable balance with natural predators; most undesirable insects are looked after by birds, mantids and ladybird larvae and adults. The snails and slugs usually succumb to my predations with flashlight on moist Spring evenings!

A few named cultivars are usually available in late Winter from several nurseries located in Victoria. Periodic droughts decimate their field stocks and they must re-import or slowly rebuild stocks from the few survivors. With one or two exceptions, the several dozen named varieties available in recent years were introduced by the Marx nursery in Cregon in the 1950's. Several irisarians are growing privately imported varieties of more recent vintage but these are rare.

Japanese Iris growers who have at least moderate success often turn to seed to enlarge their colour varieties and forms. Many fine seedlings grown from Dr. Hirao's Japanese seed are found in the enthusiasts garden. Seedlings from Hirao seed are as prevalent in the seedling class as Marx hybrids are in commercially available varieties. I have obtained two lots of seed from a garden seed importer who could not provide the source of one and reported the other as coming from India. Most of the seedlings grown from the mysterious seed flowered 14 - 15 months after germination producing smallish flowers in shades of purple and violet and many multi-branched whites. In many cases the floriferous nature of the plants compensated for small bloom size. The "Indian" seedlings should flower this season, all going well.

Seed germination, compared to most other irises, is rapid and miniature green swords usually appear within 2 - 3 weeks when seed is planted in August. I usually plant in wooden flats or pots if seed quantity is small and transplant to permanent positions when about 1 foot tall.

Permanent beds are prepared by excavating the site to a depth of $l\frac{1}{2}$ - 2 feet (down to my hard clay sub-soil) and preparing a suitable medium from the excavated soil plus additives such as rotted leaves, cow manure, and peat moss. The hole is lined with polythene sheeting purchased from most hardware stores and the enriched soil is returned. The seedlings can then be set out and the area flooded effectively. From this point growth is usually phenomenal. Old bath tubs, refrigerator cabinets, etc., have been utilized when available to contribute to the subterranean nightmare!

The future of the Japanese Iris in Australia is rather unsure. With a population of but 12 million, one-fourth of whom might be suburban gardeners, few know of the Japanese Iris, and fewer still its growth requirements. The major national garden magazine featured an article on Marx hybrids in a 1966 issue and that's the most recent photographic evidence that Japanese Irises can be grown in Australia! The indication appears that some of the hardier varieties with good flower substance if not size should be grown and more publicized by local garden enthusiasts. I found that a few choice blooms brought to the local florist and placed in her window has excited more interest than any number of photos possibly could. How well we know the inadequacy of written words or even photos to capture the elegance and serene beauty of the modern Japanese Iris.

PART II Harry W. Sutton - New South Wales

I have grown Japanese irises for over twenty years during which period I have imported plants from Japan and the USA and possessed the largest collection in Australia. Thus you can appreciate how much I loved them and, indeed, still do. However, like so many of my Iris Society friends to whom I have given many clumps, I am no longer paying the attention due to them. Despite all the care lavished on them in the past, they have let me down.

This definitely calls for an explanation. Why have so many enthusiasts ceased growing them and why have I, whose gardens of Japanese irises have been visited by garden lovers from far afield?

Dr. Hirao has remarked that in Japan light rain or mists are prevalent prior to and during the flowering season but in Australia those localities which otherwise would be ideal for Japanese irises are subject to blazing sun and possibly hot winds from the northwest during that period. This does not always happen but, when it does,

all but the hardy varieties succumb or nearly so. PASTEL PRINCESS for instance sends up twenty to thirty blooms but JEWELLED KIMONA perishes.

I personally know of three or four isolated localities where I feel sure they could be grown to perfection because there year after year during the months of October, November and December mists and/or rain can be relied upon.

In order to substantiate my gloomy theory I shall relate my own experiences.

I moved to this district after retirement about ten years ago. The nearby town with an elevation of 2350 feet is one of the noted garden meccas of the state. It has good soil and good climate. For four years my Japanese irises were all that one could desire. Then followed four years of hot winds, scorching sun and, at times, even shortage of water which, during one season, had to be carted. You can imagine what happened. Last season returned to normal and those plants which survived, repaid me.

Of course I know what should be done--plant them under shade cloth with misty sprinklers to provide the moisture--but I am too old now so continue with the tall bearded irises and liliums.

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REPORT OF THE TREASURER

FINANCIAL STATEMENT January 1, 1970 to December 31, 1970

CASH IN SAVINGS ACCOUNT	
DEPOSITS	
Dues paid direct	
EXPENSES	ψ 391.01
Stationery	\$ 25.47
Printing of Review, June (mailing postage of review Convention ribbons)	129.92
Printing of Review, Dec	95.48
Mailing postage of Review (return address stamp)	17.48
Bank service charges	\$ 8.71 \$ 277.06 277.06
Cash in checking account Dec. 31, 1970	\$ 120.81
TOTAL CASH ON HAND DECEMBER 31, 1970	
SAVINGS ACCOUNT	\$ 239.34 120.81 \$ 360.15

Arthur E. Rowe, Jr.

IRIS KAEMPFERI X IRIS PSEUDACORUS

In the quest for yellow Japanese irises Iris pseudacorus quickly comes to mind as a possible source of needed genes. In the April, 1968, issue of The Review, page 18, Dr. Tomino's results of crosses between I. pseudacorus and I. ensata (= I. kaempferi species) are given. Using I. pseudacorus as the pod (maternal) parent, he pollinated 10 flowers and obtained 4 "fruits" with a total number of 15 seeds. Using I. ensata as the pod parent, he also pollinated 10 flowers but obtained no "fruits". Dr. Tomino's report was written in 1963.

At the Ist International Symposium on Iris in Florence, Italy, in 1963, Dr. Hirao remarked "Crossing with Iris pseudacorus to introduce a yellow has been unsuccessful, as this combination always results in albino seedlings." In a letter to the Editor dated January 14, 1971, Dr. Hirao writes: "I collected seed from a Higo Jap iris pollinated by I pseudacorus pollen but the resulting seedlings were all white with no chlorophyll at all. They grew about two inches high but all died soon. Recently Dr. Tomino and Mr. Ueki raised a hybrid from I. pseudacorus pollinated by Jap iris. It lacks somewhat the chlorophyll and the leaves are yellowish-green but it is a good grower and produces many offsets. It will bloom this year for the first season. Both people however have never succeeded in raising a hybrid with Jap iris as the pod parent."

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ALL-TIME INDEX OF THE REVIEW

The indexes of all issues of THE REVIEW prior to this one are reproduced below for the benefit of members who do not have complete files. A limited supply of all back numbers, with the possible exception of the April, 1965, issue, is on hand. They may be ordered from your Editor at a cost of \$0.50 each. In addition, a Check List of Japanese Irises compiled from AIS registrations from 1950 to 1966 inclusive may be ordered at a cost of \$1.00. Persons wishing to receive a copy of the April, 1965, issue of The Review are requested to write to the Editor to learn what special arrangements might be made if necessary.

Your Editor will be happy to receive used copies of back numbers of THE REVIEW if they should become available.

Send orders to Mr. W. E. Ouweneel, Editor, The Review, R. R. 31, Box 206, Terre Haute, Ind., 47803. Make checks payable to The Society For Japanese Irises.

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