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BULLETIN  
OF THE

AMERICAN IRIS SOCIETY

OCTOBER, 1947

No. 107

IRIS RAMBLINGS

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# THE AMERICAN IRIS SOCIETY

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## FOREWORD

The BULLETIN has had relatively few editors. Bob Sturtevant was the first and served from 1921 until Mr. B. Y. Morrison took over. Mr. Morrison was responsible for a series of fine issues which lasted until Fred Cassebeer became the third editor in 1940. Fred carried the burden of an increasing responsibility attendant to an increasing membership until the combination of the editorship and work on a metropolitan ration board forced his resignation.

In January 1946 Mr. Sturtevant again became the editor, and your humble servant assumed the duties of his assistant. This combination remained in effect from issue No. 100 through No. 103, when by mutual consent the situation was reversed. Either combination was merely a masthead title, for actually we have performed exactly the same functions. The arrangement has been a most happy one and I like to look back and believe that he considered me as indispensable as his helper as I know he has been as mine.

The work of the editor is interesting and very pleasant. There is only one trouble; it is most time consuming and I find that now it is necessary for me to go back to the job of earning a living—which has been more or less a hit or miss proposition for the past two years. This issue, No. 107, is to be the last before the reins are taken over by a new editor.

Our Society has grown tremendously in the past two years and we believe that no small part of the influence in making it what it is rapidly becoming—a real gardener's flower society, truly national in scope—is due to the BULLETIN itself. Our first issue, No. 100, was a hurry job gotten out quickly from what material we could readily assemble in order to put the BULLETIN back on a time schedule. Since then the schedule has been maintained and also the whole has been made to conform to a definite plan.

To get a good picture of the BULLETIN it is necessary to consider it on a yearly basis and not as an individual issue. Believing that the BULLETIN is the one tangible thing the Society can give its members, in the very beginning Bob and I decided to increase its size. We did this and, I hope, at no sacrifice of quality. Each issue now runs around one hundred twenty-eight pages. For the year this is a total of five hundred and twelve pages, each of which averages four hundred and thirty words. For the statistically

minded this means over two hundred and twenty thousand words for the yearly unit.

Two hundred and twenty thousand words of specialized information is a bargain for your three dollar membership. Compare it, if you please, with what you get from any magazine published in America today. It will not suffer. This, ladies and gentlemen, is a book, not a bulletin!

The proportionment of space has presented a problem from the very beginning. Our Society is widely diversified as to the character of its membership. We have scientists and farmers, landscapists and color harmonists. We have garden clubbers, hybridizers, professional joiners, octogenarians and some with fuzz still on their cheeks. Some of our collectors are more avid than the most ardent philatelists. We have business men, traveling salesmen, postmen and housewives. Our membership list is studded with names of old timers who know all the answers, but they are interspersed with hundreds of new members who are still in the Pabulum and canned milk stage. Lastly, we have the man whom Harry O'Brien calls Joe Dokes—the plain honest-to-goodness gardener—and all of these people are tied together by one common bond, love for the best all-around hardy perennial that grows—the Iris.

Bob and I have tried to fill the BULLETIN with something of interest to each of these groups, items of interest from all parts of the country without over-emphasizing any one particular group or section.

Lastly, we have had to do one more thing. We have had to live down the accusation that we were in reality “the American Tall Bearded Iris Society.” If we have erred in devoting too much space—(and I do not think we have) to the beardless sorts it was in our desire to quickly belie this accusation lest it be made again.

You probably noticed that news has been grouped under re-

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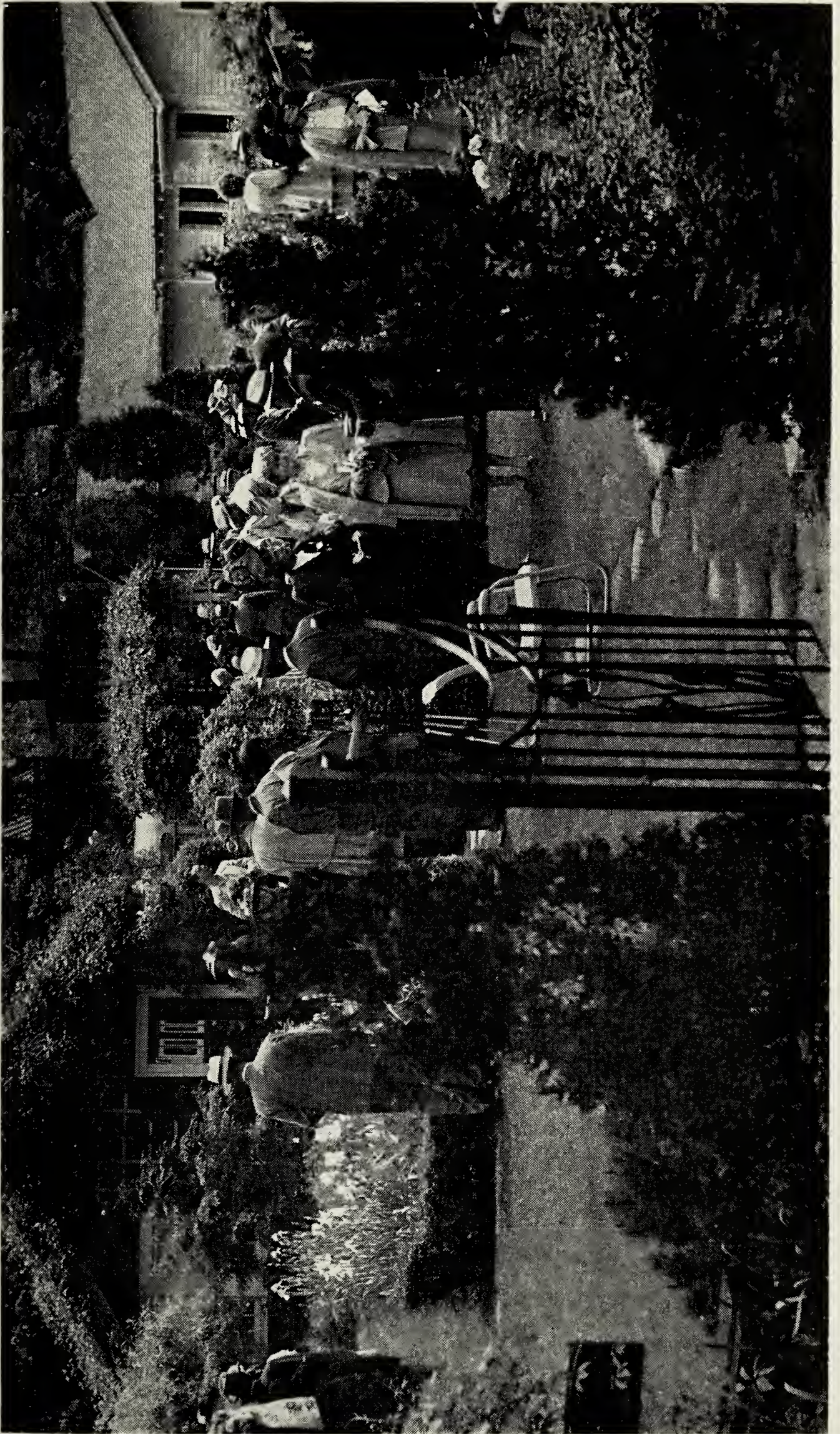
*An open wrought-iron gate in the Hall garden in Wilmette is symbolic of the cordial welcome extended to visitors at the Annual Meeting of the American Iris Society in 1947. —————>*

Photo by Sam. Y. Caldwell

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peated headings—"Special Notes," "Science," "Varietal Comments," "Member Groups," "Our Members Write," and the like. This is intentional as it makes for easy reference. Reports, registrations, membership lists, ratings, awards, these things all take their places but our weakest spot has been the illustrations. We have known it all the time, but people simply will not send us pictures, and it seems that everyone is devoted exclusively to the 35mm. Kodachrome and, for illustrative purposes, these leave a lot to be desired.

Your new editor will be Mr. Sam Y. Caldwell. Those of you who attended the Chicago meeting will probably remember him as a blond, personable young man who traipsed around with a camera and a tripod. In fact that is his profession, a free lance photographer and writer. I enjoyed Sam's piece in the last BULLETIN because of his dry humor and his fresh slant on the antics of irisarians. Some people can call you a screwball (or at least strongly intimate it) and make you like it. Sam did and has.

Bob and I are not just handing the BULLETIN over to Sam like a hot potato. At least we are giving him a plan. We know the material can be better handled. The editing can be better done. The captions need improvement. We have never been able to establish a working arrangement with the secretary's office on the matter of advertising and consequently ads have been left out for which we duly apologize. But if we do nothing else, we give Sam one thing—a heritage of good intentions and more to the point, with Jesse Wills we will act as his assistants, and also as the nucleus of an editorial committee being organized from the various committee heads, officers and regional vice presidents for the explicit purpose of getting more and better material for the BULLETIN.

Word has just come to the BULLETIN of the passing of Miss Grace Sturtevant, that great Lady of Wellesley Farms. After a lifetime of devotion to horticulture, death at last has stilled the hand that has given to the world many beautiful flowers—a hand dedicated to the creation of things beautiful. Gardeners, horticulturalists and lovers of iris the world over have suffered irreparable loss.

GEDDES DOUGLAS



## AMERICAN IRISES IN ENGLISH GARDENS

GWENDOLYN ANLEY, *England*

Before the English Irises are over the American catalogues begin to arrive. And what catalogues! Glowing with colour and scintillating with adjectives. Personally I like to pronounce that word "skintillate," especially in connection with these descriptions of American Irises. It seems to more vividly convey the sparkle, the vivacity, the brilliance of these coruscating lists. How we pore over the pages, absorbing the adjectives, comparing the descriptions of colour, shape and habit and weighing up the respective merits of each flower and frequently forgetting the necessary pinch of salt.

As Iris lovers what do we look for first? There is little doubt I think that colour attracts the eye before form, texture, poise or habit, and as regards colour there is always a strong personal element to contend with. This man does not like this or that colour or blend, whereas the next one considers it perfect. One wonders therefore how the compilers of the various catalogues all arrive at the same adjectival conclusion.

Unfortunately an abnormally early and intense heat wave swept England just as the Irises came into bloom and the heat and strong light proved more in many cases than the large petal surfaces could stand up to. The colours suffered badly too; the pale blues, pinks, some of the reds and especially the blends looked washed out an hour or so after the flowers opened. The violets, yellows and of course the whites bore the burning rays of the sun better. This extreme heat and strong sunlight are unusual features of a normal English season and one feels that few Irises were really seen at their best.

Fort Ticonderoga seemed to me one of the best in the range of brown-red tones though its falls were rather narrow. It is a beautifully smooth flower with deep mahogany-red falls and the complete absence of striation enhanced the general richness of its tone. I was delighted to see how many of the new Americans were without striation, for unless this is part of the pattern of the flower, as it usually is in the case of the plicatas, it disturbs the eye. Flamely, another good red, bore the sun pretty well but its branching left

much to be desired. Roanoke, though it is evidently a good doer faded quickly. Adirondack Chief, Fall Days and Orange Glow all run in the same range of reds with a sunny wash of burnt sienna. Garden Glory and Robin McGregor come into the burgundy or garnet-red range. The first named should be a good garden plant, for though of only medium height it appears to be very floriferous and the colour carries well.

Loomis V20 is altogether charming, is a lovely shade of pink with but slight striations. Flora Zenor, too, is lovely, so far as she goes, but there is so little of her. She has the advantage of greater height over the pinks. The pastel pinks, such as Tea Rose, Misty Rose and Santa Rosa, should all be grown in semi-shade if their delicate *nuances* of colour are to be seen to perfection. The same applies to the blends, California Peach, Prairie Sunset, Cascade Splendor. It would not be fair to criticise any of these on this year's performance as they had not a fair chance. Some of them which bloomed last year were very striking. Cedar Rose, which appealed to me very much last year, was bleached out of all recognition this season, but Old Rose kept its colour remarkably well.

I have almost forgotten to mention Pink Lace. I liked this immensely. It is possibly a purer colour than Dr. Loomis' seedling and the pink tip to the tangerine beard is perhaps less disturbing than solid tangerine. Mr. David Hall's 46-10 attracted immediate attention by reason of its unusually large crests and wide tan beard. Fantasy, a massive pink in which there is a hint of blue, did not appeal to me as much as the shell pinks, but I liked the contrast between the large purple buds and the near rose-pink flowers. I think this Iris would show to advantage if grown with Violet Symphony, Mulberry Rose or Lord Dongan, as the magenta tones of any of these three would eliminate the blue from Fantasy and make it appear pure rose.

How few people realize the importance of planting Irises with the right companions so that the colour of each can be seen to the best advantage and in perfect complement, the one to the other. There is no doubt in my mind that unless a variety can be placed in isolation for judging the quality of its colour, its neighbours should be most carefully chosen, for by them the Iris in question can be marred. I have been particularly interested in the suggestions for colour combinations set out in one of the American



catalogues as it has long seemed to me that the planting of this beautiful flower has been altogether too haphazard.

Black Forest is the blackest thing in flowers I have yet seen, for whereas most "blacks" are deep violet with a black sheen, this Iris appears to be quite black lit here and there with a deep violet sheen, and that only where the light falls on it at a certain angle. It is a short growing plant with small flowers, and while it is very arresting one wonders whether so sombre a flower contributes anything of beauty to a flower garden. Nevertheless it is a great achievement. Black Banner, another near black Iris, is a flower of very great beauty, both in form and colour and it appears to be a very good doer.

From Black Forest we pass through the many shades of violet, purple and blue. Chivalry appears to be the most highly rated Iris in America at the moment. As I saw it it was not well placed and I was not impressed with the colour which seemed thick and inky. The Admiral, too, disappointed me. It has been compared with our English variety Blue Ensign. To my mind the latter is a much better "blue" which appears almost cornflower blue in the evening light, and the pure beard, as contrasted with the Admiral's gold beard, just makes all the difference to the general colour effect. The set of the falls of the Ensign is rather the more jaunty or "lilting" as I have heard it described.

Blue Glow appealed strongly to my colour sense. The rich shade of blue without striation was very striking. The brown flush on the shoulders of the haft was a great addition to its colour value. This same brown is seen on the haft and continues into the heart of Master Charles. This, and the brown tipped beard of the last named give great distinction and an unusual richness to these two varieties.

I must, I fear, confess to a sense of disappointment in the highly praised Helen McGregor. There is no doubt but that it is a first class doer, but neither the form or the colour were able to stand up to the difficult conditions. The sun bleached the flowers as soon as they opened and the heat collapsed the standards to such an extent that they became limp and flattened. It was possible to appreciate the ethereal effect of the soft cream shading on the haft and also the free flowering qualities of the plant. I should like to see this variety grown in semi-shade.

Blue Valley and Blue Rhythm. I find my notes regarding these two are inclined to run to adjectives. Both struck me as beautiful

flowers both in shape and colour, neither of which seemed the least affected by the weather and my preference varied from day to day. I particularly liked the shape of the former with its flaring falls and ruffled standards but the cone formed by the standards of Blue Rhythm gave the flower great strength and resistance to bad weather. The branching of the last named was very good though it does not compare with Great Lakes in this regard. Though Great Lakes is not an American Iris it might be mentioned here. Its branching is remarkable, especially in these days when everything seems to be sacrificed to colour and when one is frequently called upon to admire flowers of a new colour placed singly at alternate intervals on a somewhat bare stem. But as seen in England Great Lakes is not as pure a "blue" as some of the older varieties and the texture is not as smooth and satiny as one would like, or as one expected from the "write-ups." This is not merely a personal opinion; I heard it expressed by several well known Iris growers this summer when the Iris seemed to be really well established and showing its quality better than it has done in previous years.

Both Lake George and Cloud Castle were undoubtedly affected by the extreme heat which resulted in a slight cockling of the petals which destroyed that desirable smoothness.

All my life I have hoped for a reverse blue and white bicolor and I awaited with the greatest impatience the blooming of a flower advertised as such. Alas! Like so many other things in life on which I have pinned my hopes it fell far below my expectations. The "pure white falls" were the colour of full cream milk, the "pale blue standards" were the colour of milk from which the cream has been skimmed. As this Iris bloomed during a cloudy spell its colour, or lack of it, cannot be "blamed on" the weather.

Some of the yellows and yellow tones are magnificent. Arab Chief is gorgeous and Ola Kala a dazzling colour. Here are two Irises which would add considerable brilliance to a mixed collection for neither have that crude quality of some yellows which makes them "steal the thunder" from every other adjacent flower. The clear, delicate yellow of Marian Vaughn is charmingly fresh and the white flash on the falls is an additional beauty. Both standards and falls are delightfully ruffled. Amandine, another ruffled beauty, gives the impression of great fragility, but I was surprised how well it stood the difficult conditions. The slightly greenish, lemon



tone is very unusual and would probably be seen at its best in partial shade. So many of these pale colours demand shadowy places. Mattie Gates, a lemon and white reverse bitone and Moonlight Madonna, a rather pale shade of lemon are cool and refreshing flowers. In the soft russet tones Russet Wings was very pleasing but was not doing as well as most. Golden Russet was overpowering as to size and consequently lacked the air of breeding and refinement one associates with the Iris. Nightingale and Stardom appeared to be almost identical in colour this year and I liked both of them better than Tobacco Road which I fancy had had much of its colour burnt out.

A lovely ruffled Iris, between cream and primrose, Desert Song would be a really "good mixer" in a border of mixed colours where white would strike a strident note. The spacing of the flowers was very pleasing. There are several good whites which I should like for a "Ghost Garden" where one could walk in the cool of the evening, for I feel convinced that the whites look their best when grown right away from all the other colours except possibly the palest blue. The faint olive striation on Vigil seemed to enhance the pure white of this Iris and the faint ruffling gave it further beauty. The very ruffled Snow Flurry always delights me and I like the icy blue tinge with which it opens. There is a wonderful grace about this Iris. The material our American cousins call "Sharkskin" must surely be the same thing as "Angel Skin,"—a delectable leathery silk of dull, heavy texture which we knew in dream days before the War. This exactly describes the texture of Sharkskin, a very good white of fine quality. I was disappointed in Lady Boscawen but liked New Snow with ruffled standards and falls and no striation. I have a weakness for ruffled Irises particularly when they are white Irises.

Of the Mohrs what shall I say? Lady Mohr is certainly a lovely lady with a great delicacy of colouring and charming as I saw her with several flowers open on three foot stems. But of the others? Well, it is possible to have too much even of a good thing and I feel inclined to say "Please, Nomohr."

## FROM THE KENT GROUP—ENGLAND

Most years the Iris Season is all too short, but this year the flowers just flashed by in a kaleidoscopic stream of colour, a stream to which several new shades had been added. The intense heat produced spikes with as many as four flowers in bloom simultaneously and at the Show a spike of Plicata "Los Angeles" bore five perfect blooms.

Consequently the activities of the Kent Group were hustled into a bare two weeks, but no less enjoyable for all this.

At the Chelsea Flower Show, two of our Grower Members staged a surprising number of varieties, although the date did not coincide with the peak of the Flowering Season and of the Irises put up before the Joint Iris Committee, "White Wedgwood" and "Priscilla" were selected for trial at Wisley. The first-named is an ice blue, fading to white with a pale beard and the latter possibly the whitest of any Iris yet raised: paper-white with a beard to match, with no haft striation to mar its purity. It is a great step forward to the goal of a clean cold white, but is only 2½ feet high.

Less than a fortnight later came the Iris Show and the following account has been written by the Assistant Secretary:

"The weather behaved this year in a manner calculated to drive all but the most hardened Iris growers quite frantic. Bitter cold days with cutting winds continuing through April retarded the growing time, and these conditions were rapidly replaced by others equally trying, with abnormal heat in Mid-May. Despairing enthusiasts saw their pet plants blooming and fading a whole week before the Show date. In spite of all this however, when the Horticultural Hall opened its doors on June 3rd and 4th (in a temperature rising to 90°) Irises were the chief feature of the Show and of this display the Kent Group formed a part with 199 spikes exhibited by its members.

"The stand was very attractive as there was good variety in colour, although perhaps a critic might have wished for a little more yellow in the general scheme. The old favourite "Frieda Mohr" survived the heat well and came in for quite a lot of attention from the public.

"Included in the Group Exhibit were several modern varieties, among which were "Great Lakes:" clear blue, with strong standards and falls and splendid branching. "Summer Tan": a



soft yellow with a butterscotch tinge throughout. "Prairie Sunset": which might be described as a confection, being a delicate pink merging to apricot and peach. "Torchlight": which is an arresting flower with orange-tinged yellow standards and deep red falls.

"In the Iris Society's competitive classes were included a surprising number of new introductions, most of them from our busy hybridist friends in the United States, who by their large scale breeding activities are raising Iris of shades previously undreamed of, and intensifying colours already known. The feature which impressed one when seeing these Irises, is their smoothness, and in the majority, the complete absence of haft striation, the colour running deep into the heart of the flower. From now on, it seems, fashion bans haft striation, except perhaps in the Plicatas."

\* \* \*

"I came on it suddenly. I had seen it many times before but each time I received the same shock of delight. A handsome flower, a fine grower, well branched stems, the answer to the breeder's prayer, that is "Great Lakes," the magnificent Canadian blue. What an Iris! Much paler and quite different, but as lovely in its own way, was "Helen McGregor" of coolest blue with rounded ruffled petals and an air of serenity.

"But almost the most beautiful iris at the Show was a delightful rose red with just a suspicion of orange in it. I saw it lit by the slanting rays of the sun against the grey stone background and I shall not easily forget "Red Amber." Many irises hit one between the eyes; they are brilliant, hard, almost gaudy. Perhaps that was why my eyes were grateful for "Mandalay's" indescribable but soft shades of pink, buff, orange and apricot, intermixed and smooth. The near black irises are most effective when cut for exhibition. In the comparatively subdued light of the Hall they glisten with the glow of midnight, and "Sable," a fine garden iris, appeared even deeper in colour than it really is. After inspecting all the reds "Garden Glory" seemed the only one to combine good form, smooth colour, and that elusive something called quality. A refined iris in the best sense of the word. And shining like silk was a brilliant lemon yellow lit by a flash of white on the falls, twin to "Mattie Gates" the new American, but British born a seedling of Cedric Morris's. Another seedling this time by Canon Meyer with that touch of green undertone present in those irises of his descended from "Priestess" was very intriguing. A deep

sombre beard contributed to its effect. It is good to see older irises sometimes. They act as yardsticks for the judgment of progress. "Aline" well shown on several Trade Stands made one wonder whether the latest American blues were quite such an advance as one had thought. Surpassed in form and texture of petals "Aline" remains very blue. In the blistering heat the irises faded fast but their beauty lingered on in the mind, and this memory is all we have until they open for us once more after twelve long months. The memory will however remain fresh with all true iris lovers. In conclusion may I congratulate the Kent Group on the fine exhibit they staged at the Show. It was most attractive and highly creditable to all concerned."—*Leslie Cave*.

On the Saturday following the Iris Show, the Kent Group held its own Seedling Show. The result of the Seedling Competition gave Mr. Goulton first place with a sea-lavender blue self with a beard to match. This was a huge flower with very flaring falls and good branching. Next came Mrs. Murrell with a bright variegata blend from Radiant  $\times$  Torchlight parentage. The standards were a clear orange and falls a lovely shade of brick red. Very tall. Third chosen was one of Mr. Burton's seedlings. A white washed with inky blue. The beard can be best described as the colour and texture of wild rabbit's fur. This was not a branched Iris but the small neat flowers were nicely carried at intervals up and down the stem and at the time of judging there were three flowers open.

On the following day (Sunday), eight of us journeyed to Woking on the invitation of Mrs. Anley and Mr. H. J. Randall. It is regretted that more Members were unable to join us, because these two gardens are of great interest and contain all the worthwhile new Irises as well as the best of our old friends.

At Mrs. Anley's, "Lighthouse" must be mentioned. A light pink with a creamy yellow blaze radiating outwards from the centre of the falls. A great garden Iris. "Edward of Windsor," looking very pink and increasing well, a point worth noting in these new seashell pinks. Another of this class is "Flora Zenor" and is taller than the rest and more inclined to coral tones. Mrs. Anley's irises were beautifully grouped in large crescent-shaped beds, made up of rock pockets. All were unobtrusively staked and presented a picture of neatness seldom seen, especially towards the end of the season.

There were many other absorbing things to see in this delightful



garden. The shrubs, tree peonies, above all the alpines and a fine collection of dwarfed trees and shrubs, growing in attractive glazed bowls. We could have spent a whole day inspecting all these interesting plants.

After lunch we went over to Mr. Randall's garden nearby. This garden is surely the Mecca of all Iris enthusiasts and is always completely up to date, containing as it does, all that is new in Irises from the United States.

*WHITE*: "New Snow": A tall, nicely branched, very white Iris, though the colour is still approached through ice blue. This Iris is beautifully ruffled.

*YELLOW*: "Mattie Gates": A cool canary yellow with a white blaze on the falls. The texture is tough yet soft and the colour is laid thickly at the haft and runs neatly, completely round the falls. This Iris was particularly refreshing during the hot season, such as we have just experienced.

*ORANGE*: "Fort Ticonderoga": A burnt orange of great brilliance and the best shaped Iris I have yet seen in this class, several having very good colour, but ugly, open standards.

*PINK*: "Dave Hall numbered Seedling": Another stride forward in this new seashell class and I believe the fourth generation from the first appearances a few years ago. This was the clearest self and carried the now well-known distinguishing mark: the tangerine beard. It is also taller than its ancestors, which have lacked height.

*STRAWBERRY BLOND*: "Fantasy": This is the name given to another branch of the seashell family, though this time there is blue in the pink, giving a cyclamen shade. The tangerine beard is again present, but in this Iris is nearer scarlet or geranium red. "Fantasy" has a large flower, beautifully ruffled. A clump of this would surely be an unforgettable sight. Let us hope it will settle down in our climate.

*RED*: "Edward Lapham": This is an advance on Hester Prynne, Cheerio, Red Rover, etc., etc., because it is a richer red, lacks haft striation and does not sport the usual lurid yellow beard of its kind. One can not help thinking, however, that we are still a long way off true cardinal red, without mahogany or purple shadow.

*BURGUNDY*: "Garden Glory": Although this Iris is rather short and stumpy, it is probably the first one to be noticed when looking

on a mass planting of all colour classes. It is a perfect self of rich ruby tones. There is nothing quite like this Iris and it was the object of intense admiration.

*BROWN*: "Nightingale": A light russet brown and something new again. Rather like "Prairie Sunset" for shape and form, but whereas "Prairie Sunset" conveys an atmosphere of high summer, "Nightingale" is of the Autumn at its softest brown period.

*BLUE*: "Helen McGregor": This is undoubtedly the cleanest light blue yet introduced. Bred from two whites the colour tone is between Faience blue and Sky grey. Its shape can only be described as exquisite. Ruffled standard completely domed and meeting at the tips, gently flaring falls with a white flush below the beard. The substance of the petal is surprising for so delicate a shade of blue. Of course it has fine branching, and in fact it has everything.

*BLUE*: "Blue Valley": Probably the purists would say there is a trace of pink in this medium blue, as there is said to be in "Great Lakes," but it would need a spectroscope to find it. This is a softer blue than "Great Lakes," which is now the measure of all new introductions in this class and the flower of "Blue Valley" is less severe in line, being very slightly waved. It certainly looks very blue from a distance.

*BLACK*: "Black Forest": It is no exaggeration to call this Iris black. It is. The very dullest blue black imaginable. A self, and the beard is as black as the rest of the flower. A good shaped flower but rather short and not well branched.

*PLICATA*: "Magic Carpet": This is one of those Plicatas which has the rare merit of being a good garden Iris. The markings are irregular, "Orloff" fashion and it is a medley of soft pink, creamy yellow, cinnamon and brown.

As we prepared to leave Mr. Randall's, the rain came down in torrents, and as far as the Kent Group was concerned, this was the end of the Season. A fortnight before, there had been two or three varieties in bloom in the average garden; now many varieties were closing their last flowers.

ANTHONY W. DREWETT, *Hon. Sec'y.*



## THREE OAKS, THREE BUDS, AND THREE POINTS NORTH

*John Dolman, Jr., Pa.*

For some years I have been hoping for an opportunity to see what has often been called "the most beautiful iris garden in America," and in 1947 I was able at last to accept Mrs. Blake's long-standing invitation and journey to Spartanburg. I left Swarthmore May 9—with some fears about the weather, since it had been raining daily for weeks. On arriving at Spartanburg next day, however, I found they had been having perfect weather there; the iris was at peak, though ten days late.

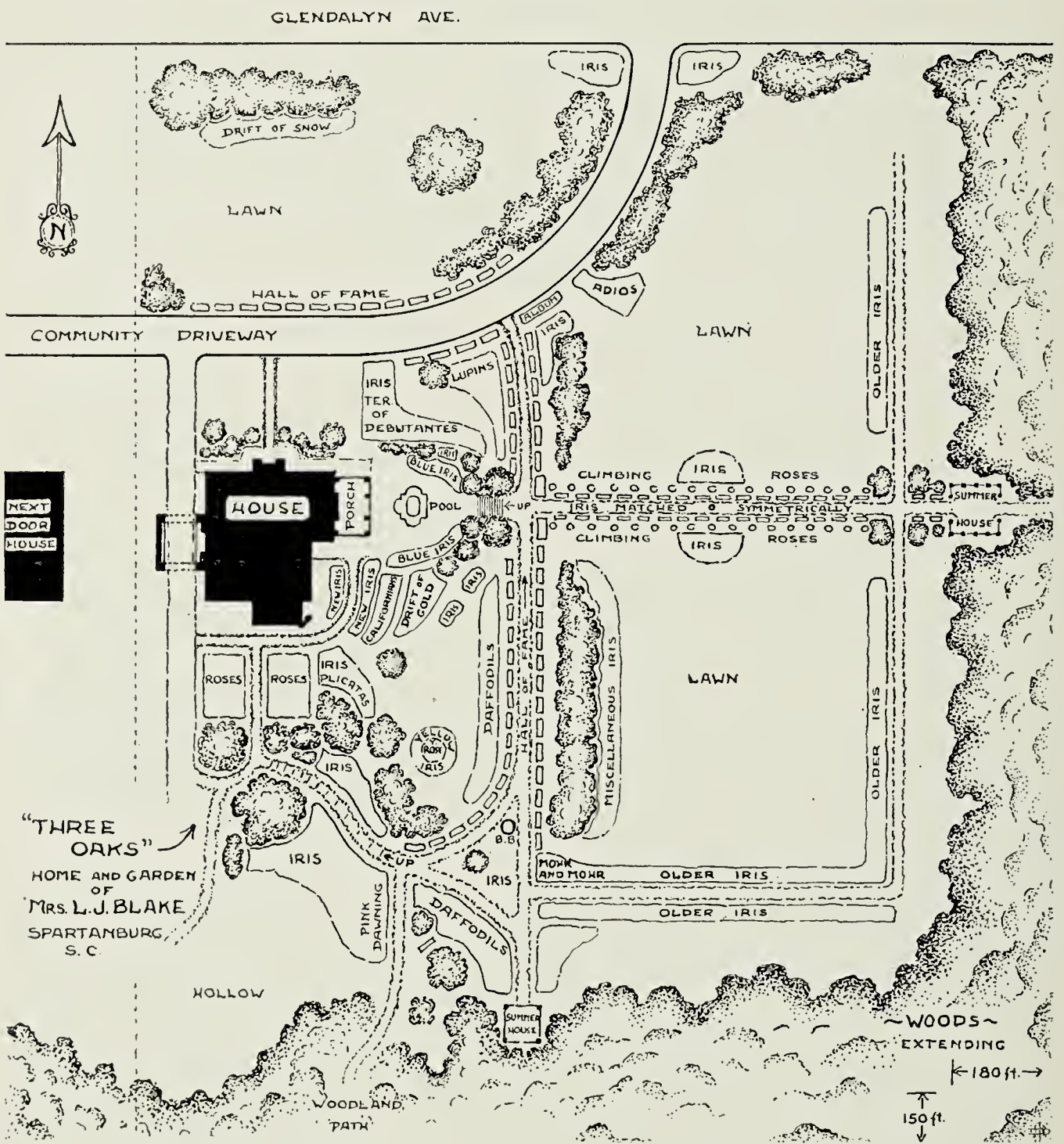
The charm of "Three Oaks" has not been exaggerated. There may be more beautiful gardens in the general sense; certainly there are more elaborate and expensive ones. There may be more comprehensive collections of iris (though not many); certainly there are some from which ex-novelties are more promptly eliminated. But I know of no garden that so perfectly combines an informal personal touch, a green thumb for all sorts of flowers, a special love of irises, a special knack of growing them well, a natural feeling for landscape design, and an ideal location, with plenty of room.

Otherwriters, in earlier BULLETINS, have described the general layout of the garden, with its Terrace of Debutantes, its Hall of Fame, its Adios, or Late Drift, its Drift of Snow, and so on. I shall not repeat, except to suggest that a rough plan of the garden might interest those who have yet to visit it.

I was told by many of the local visitors—of whom there were several hundred in the day and a half I spent at Three Oaks—that the bloom was not quite equal in volume and height to that of 1946. This was hard to believe, though on careful inspection I did discover a few varieties that seemed a bit smaller than I had seen them at their best. Most varieties, however, were tall and opulent, not overcrowded, and very tastefully arranged.

The Hall of Fame, now greatly expanded, contains much of the most interesting material in the garden. I noted that there had been many additions and substitutions since the list published in the BULLETIN several years ago.

Blue Valley held the place of honor in Kenneth Smith's "niche," across the driveway from the front door—the first plant of it I had



Landscape plan of "Three Oaks" drawn by John Dolman.



seen outside the originator's garden. It was growing well, and seemed taller and better branched than in its first year; the color and ruffling were good, though the form did not seem quite as finished as I remembered it at Staten Island in 1945. Fall Days, which I had not seen before, was doing well in two places, not very large, but colorful, smooth, and good in substance.

In the Geddes Douglas niche I saw Amandine for the first time. Only one flower was open, and Mrs. Blake said it was not typical, but the color was soft and pleasing.

In the Whiting niche I got my first look at Mellowglow, and was a bit disappointed; the color was luscious, but the substance seemed inadequate for the southern sun, and the standards were open and flabby. On the other hand Blue Rhythm was performing magnificently here, as it does everywhere, and Cloth of Gold was a major sensation with its brilliant color and volume of bloom; some of the flowers were partly hidden among the tall leaves, but there were so many of them that the garden value of the clump was spectacular. With very few exceptions, the Whiting irises seem to grow extremely well at Three Oaks. There was one large drift of them, including older introductions and numbered seedlings, that would make an impressive garden by itself.

In a bed appropriately marked "Family Album," Three Oaks was excellent, Neighbor was good (though not equal to its sister Blue Valley), Louise Blake was short-stemmed and a trifle messy, and Lady Louise was outstanding. It is a large ruffled, creamy blend, with just a suggestion of plicata influence in the brownish center.

In the Terrace of Debutantes I renewed acquaintance with His Excellency, New Snow, Lady Boscawen, Rocket, and many others, and saw for the first time: Black Forest, a shorter, smaller, much blacker Meldoric with the same horizontal stiffness and poor branching but with very good color and substance; Lilac Lane (Whiting 4277), a ruffled pale lilac of good form and substance, and improvement, I should say, on Modiste; Mt. Timp, a heavily marked rosy plicata; Gentle Florence, an airy, graceful, ruffled flower that might be described as a slightly lavender Priscilla; Crystal Gold, a yellow-edged white, better than Elsa Sass and perhaps better than Misty Gold, though less brilliant than Mattie Gates (which was blooming elsewhere in the garden); Cordovan, a disappointingly pale blend (if correctly labeled); and Vigil, a very smooth, large white, quite

different from New Snow or Lady Boscawen. Of the ones I had seen before, New Snow was performing perfectly, Lady Boscawen not so well; it was floriferous, but not up to standard in size or height. Rocket still seemed the best of the Naranja line, though it had only one stalk on a fairly large clump. His Excellency, advantageously placed against the late sun, was rich and attractive.

Other new varieties, planted elsewhere, included a very smooth warm red blend (No. 16-44) from Jesse Wills; Doris Templeton, a slightly paler, yellower version of Sonny Boy; Corporal Mary, a large, semi-flaring, ruffled cream with buff hafts; Good News, a deep old-gold self, rather short on a year-plant; Lavender and Gold Lace, a very colorful and attractive blend; and Everglow, a perfectly huge lavender with noisy hafts.

Mrs. Blake has a large drift marked "Pink Dawning," edged with Noweta and Pink Ruffles, and containing most of the earlier "preludes to pink" such as Sprindrift, Flora Zenor, the Loomis S. Q. and T. Q. seedlings, several Fay and Lapham seedlings, Overture, Dream Girl, and other Hall '42 seedlings; also Azalea and Fantasy. All but Fantasy showed some sign of the weak standards, spindly stalks, or soft narrow falls that seem to plague most of the irises carrying this color gene, and that Dave Hall and others are trying so hard to breed out.

Merely to catalogue the better-known varieties that were doing well at Three Oaks would require many pages. Mrs. Blake is fond of blues, and has a drift of good ones on the terrace close to her veranda. Chivalry, Lake Shannon, Sylvia Murray and Shining Waters were performing beautifully on established plants; Chicory Blue, Great Lakes and Lake George not quite so well; Helen McGregor, planted elsewhere, had gone by, but the one-year plant looked vigorous. Among the yellows, Golden Majesty was dominating a large section of the garden, with a whole terrace of it marked "Drift of Gold." Berkeley Gold was excellent. Of the three rival clumps of the Glutzbeck yellows—Spun Gold, Ming Yellow and Golden Glow—the last was performing best, and Spun Gold worst, as usual.

As Three Oaks is the most southern and earliest of the leading iris gardens, one would expect to find some differences in comparative performance. Average performance was extremely good, but it was inevitable that I should find some varieties that do well elsewhere doing poorly here, and vice versa. For example, my own



seedlings, with two or three exceptions, were not doing nearly so well as they do in their home environment; and the exceptions were not the ones that have done well in California. Yet the California irises do well at Three Oaks. For another example, Lady Boscawen was not doing half as well as Snow Carnival, though it has done better everywhere else I have seen them together. Most unfortunately, Louise Blake was less impressive in the garden of its namesake than anywhere else I have seen it; at Worcester and Concord a month later I saw it much larger and taller and clearer in color. But the midwestern irises, and those from the west coast, especially the Californians, were performing magnificently for Mrs. Blake—including many that have utterly refused to grow for me. Baffling, isn't it?—this iris game! But we must not forget that the same variety in the same garden will perform differently in two successive years, or on two different clumps in the same year. Just for example, Mrs. Blake had two clumps marked Sylvia Murray, but you would never know they were the same variety; both were floriferous and the color was the same, but on one clump every flower was globular, while on the other every flower was saucily flaring. That sort of thing ought to remind us that our comments, however honest at the moment, are always relative.

A visit to Three Oaks is an inspiration to any real iris lover, and it leaves one with a sense of admiration and amazement. How a garden of such size and scope, with so many flowering plants for all seasons and such a tremendous collection of iris, can be maintained in such beautiful condition by one woman, with no more help than that of a part-time gardener working three days a week, is almost beyond comprehension.

Before leaving Spartanburg I spent a very pleasant hour with Mr. and Mrs. Gabriel Cannon. Mr. Cannon has a small garden compared with Mrs. Blake's, and his iris collection is perhaps a bit overshadowed by his wife's remarkable collection of antiques; but he does grow iris well, and grows only the best. Master Charles was doing better for him than for Mrs. Blake, and several others were doing better than I had seen them do anywhere else—notably Chief Poking Fire.

I returned home to find more bad weather brewing, and plenty of rot in the iris beds. The season was so fiendish in the Philadelphia region that I shall mercifully withhold comment on iris performance. We did finally achieve a small garden meeting of A. I. S.

members in Swarthmore on May 31. I do feel, however, that I should mention some of the very impressive seedlings exhibited as cut stalks by Roy Mikle, who hybridizes iris at Harrisburg, Pa., and is never visited by A. I. S. judges.

His outstanding seedling is registered as Mrs. Haldeman O'Connor, named for one of the most enthusiastic of our Charter Members. It is a smooth, soft yellow of rich coloring, slightly deeper in tone at the clean, unmarked haft; it is fairly large, well formed, extremely heavy in substance, with strong, conical standards and broad, semi-flaring falls; and it is borne on the most remarkable stem I have ever seen. The branching is superb, the placing perfect, and each of the spurs carries several buds (usually four), which open in such slow succession that the blooming season is abnormally long, even though two or three flowers are open at one time on each stalk. Though I saw it only on a cut stalk which had been jounced around for a hundred miles in a car, I believe it was the most distinguished new iris I saw in 1947, and one of the most refined I have ever seen. That cut stalk, incidentally, went on blooming in my home for five days, and gave me a good Kodachrome on the third day. If Mrs. Haldeman O'Connor grows as well elsewhere as it does in Harrisburg, I think it will prove a sensation.

In addition, Mr. Mikle showed us a tall, well-branched pastel orange-cream iris with tangerine beard and very strong standards; a beautifully formed and beautifully branched gray-lavender self; a flaring bitone blend in pink-lavender and copper tone; a large ruffled purple self; a fine two-toned canary yellow on the Golden Fleece pattern, with form and substance among the best in this class; and half-a-dozen others, all of high quality. I suggest a pilgrimage of judges to Harrisburg in 1948.

Like some three hundred other A. I. S. members, I journeyed to Evanston and Wilmette on June 7, to gaze upon the most fascinating array of colorful iris buds I have ever seen. I saw one of a most astonishing orange-cerise color; I saw one in a most entrancing medley of yellow and brown; and I saw one in a most alluring shade of light, true pink, which Dave Hall called "baby pink." Like the student who had heard his instructor read part of *Hamlet*, "I have often wondered how the darned thing turned out"—for alas! these three, and a thousand others, failed to open before I had to leave. Iris buds are beautiful things when you can stick around



to watch them open; but they are not very satisfying as the objective of a 2,000-mile round trip.

However, the company was good, the annual meeting highly successful, and a few flowers did open before we left. Fortunately, these included at least some of the pinks we all wanted to see, and I was told that the early ones were the best ones. Of the Hall '46 crop I liked best No. 46-14 and No. 46-16. The former was larger, and beautifully ruffled, and though the standards were somewhat open they seemed to have substance and still looked good after the Saturday night rain. The other, though not large, was quite the most colorful of the flamigo pinks, and it also stood the rain. No. 46-09 had more flowers open on Saturday than any other, and attracted first attention; the flowers were large, on tall stems, and the color was good, though not as deep as that of some others. I was a bit skeptical of its substance, but it came through the rain better than some that appeared to have better substance. No. 46-24 was one of the most colorful, and appeared to have good substance, but the plant seemed less vigorous than most. No. 46-15 was the pinkest I saw, though not one of the largest. Cherie, best of the '44 crop, opened in time to show its high quality to those who were still on hand Sunday morning; so did Fantasy, which was much larger and better branched than at Spartanburg; and so did Radiation, which many visitors liked as well as the flamigo pinks. The most striking flower seen in the Hall seedling patches was No. 47-01, a brilliant rose-and-carmine bicolor with a bright tangerine beard; it was a trifle veined and coarse on close inspection, but had terrific "carry" in the garden.

In spite of my chagrin at having to leave all those unopened buds, I saw enough of Dave Hall's pinks to form two conclusions. The first is that he has made real and notable progress in improving the range, depth, and clarity of color, the intensity of the beards, the size, form, height, and branching, and the vigor of growth. The second is that despite undoubted improvement in substance he has not yet completely conquered the genetic linkage between the flamingo pink coloring and the tendency of standards to open and falls to pinch too soon after the flower opens. Of the ones I saw, No. 46-16 comes nearest to success in this very difficult feat of breeding. No. 46-14 comes close to it in respect to the falls; the standards have substance, but they do open. No. 46-07 comes close to it in respect to the standards, but the falls do pinch on the second

morning. If he can get the standards of one linked with the falls of the other he will have solved the problem; and I do not doubt that he will solve it in another generation or two, one way or another.

I also saw many things of interest in the Cook and Fay gardens, including more tangerine beards, some good yellows, a good dark *plicata* (Fire Dance), and some good dark purples. I was particularly interested in Mr. Fay's Pale Dawn, which seemed to approximate the color note of the old Mother of Pearl in a much larger and better-formed flower on a much stronger stem—something I have been looking for these many years. But I shall leave further comment on the Evanston-Wilmette season to those who were there later and saw more.

I had hoped to drop in—or more accurately, butt in—on the New England regional meeting a week later, but was delayed by a heavy cold. However I did get to Worcester, Lowell, and Concord in time to see the tail end of the midseason bloom and most of the late varieties and seedlings.

Arriving at Worcester late on Monday afternoon, June 16, I had two very pleasant hours in Mr. McKee's garden, and two more early the following morning—the ideal times to enjoy iris. I found him mildly excited over two newly-opened seedlings of considerable promise. One (No. 47-11) was an intense flaming orange, somewhat similar in color to *Ella Callis*, but more smoothly blended, in a broadly-flaring flower of excellent form and very heavy substance on a tall, well-branched stem. I marked it down at once for an H. C. vote, though I doubt whether enough judges will have seen it to give it the award this year. The other (No. 47-17) was a large, flaring, creamy bicolor which seemed to be an important step in the direction of the yellow *amoena* that so many breeders are working for. I have seen yellow *amoenas* of slightly clearer color, but only in flowers of poor substance with pinched falls; this one had exceptionally heavy substance, with strong midribs and very wide petals. The standards were almost pure white; the falls had an overlay of slightly olive-toned yellow, not perfectly smooth on close inspection, but clear enough at a little distance to give the *amoena* effect.

Those who saw the one stunted bloom on *Miogem* at the A. I. S. visitation last year would have been amazed to see the mass of tall bloom on the same plant a year later. It is a stunning iris, though



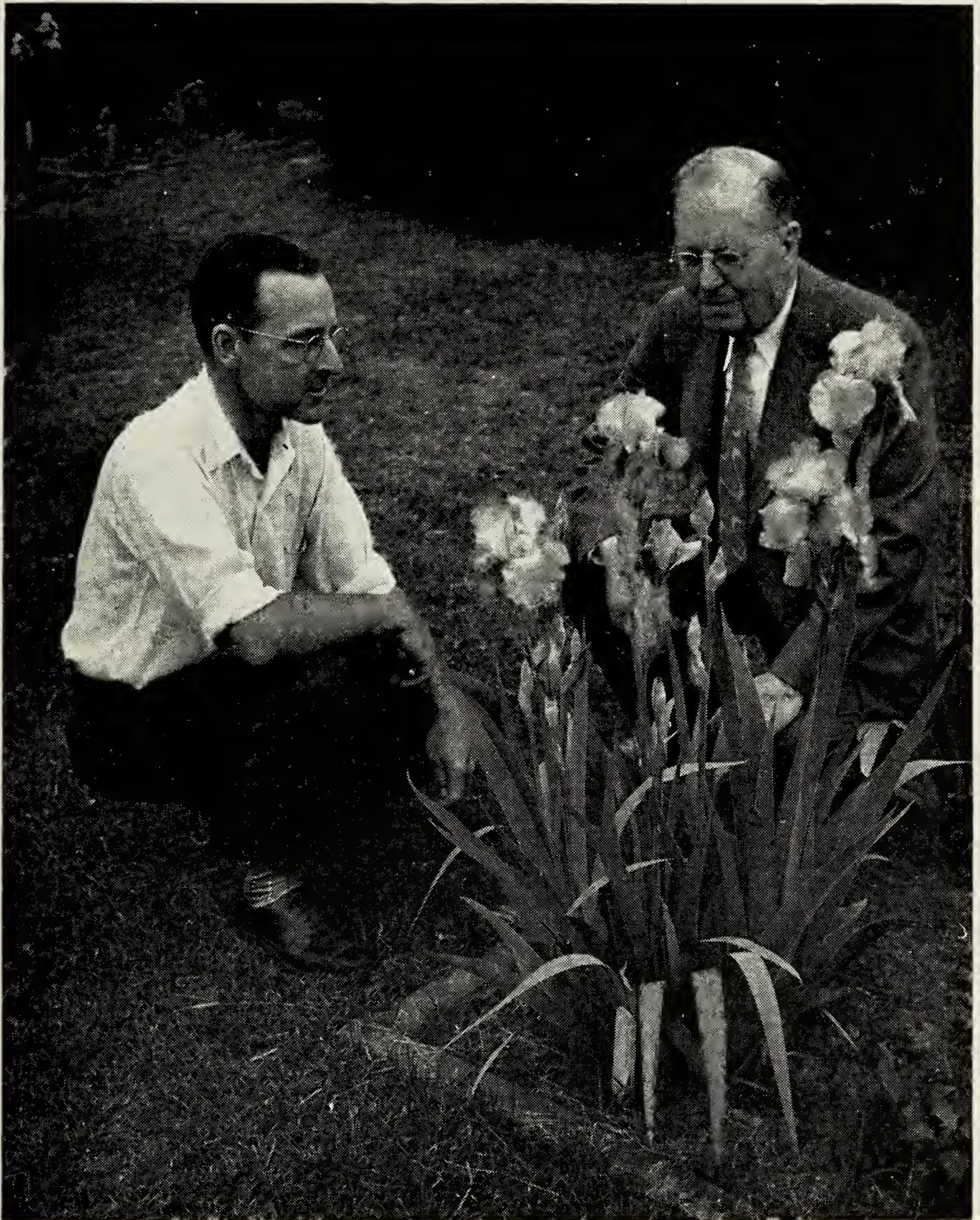


Photo by F. W. Cassebeer

*Editor Douglas (left) and William J. McKee (right), noted hybridizer, discuss a fine clump of Dreamcastle (Cook '43) widely acclaimed for its wide-hafted flowers of lavender-pink.*



the color is not quite as deep when it grows up. The slightly paler, but somewhat similar Augusta had also grown up into a striking clump, and is an equally effective garden iris. Mary Ellen, which I missed seeing last year, was a pleasing, deep, soft red. There were so many fine seedlings, old and new, that I could not begin to mention them all. Among the most impressive varieties from other growers that I saw here for the first time were Three Cheers, a stunning big neglecta, twice the size and height of Amigo; Sierra Lakes, a fine blue that seemed to be doing better than Great Lakes; Distance, a flaring, very pale blue, rather bunched on a one-year stalk (short here, but tall at Concord); and Blue Glow, a dark blue self with brown hafts and a pale beard.

From Worcester I drove on to Lowell, and spent several hours with Mr. and Mrs. Nesmith. Their garden was only a trifle beyond peak, and full of good things. Here I saw for the first time: Exquisite, a small but smooth peachy pink, better than most of the earlier tangerine-bearded ones; Vision Fugitive, which was huge, but seemed a bit dull and uninteresting to my eye; Lucky Star, a Golden Fleece type of yellow, more flaring, but less clear in color; Tan Boy, a pale brown blend which seemed the best of the Marx seedlings; Skyward, a medium blue, rather undistinguished except for its height; Golden Epaulette, a two-toned yellow not unlike Fair Elaine, with the yellow extending more nearly to the ends of the falls; a large, smooth, two-toned red (No. B-79) from Mr. Hall of Moorestown, N. J., which I liked very well; an intense brassy (No. Y-53) from the same grower, which many will like for its flaring form, but which was too stiffly horizontal for my taste; and a number of new Nesmith seedlings, several of which I liked very much. These included a good two-toned rose-violet (No. 44-27-G), a very lark blue (No. 45-55-A) from Nightfall  $\times$  Pensive, and two smooth, wide-petalled blends (No. 44-24-Y and No. 44-15-A); but the best of all, in my opinion, was a very smooth, dark henna self (No. 44-27-A) which seemed to me well worthy of introduction.

Amandine was excellent at Lowell, a huge clump of it, cool, creamy, and smooth; Miogem was outstanding; Barbara Luddy was a mass of warm pink; and Red Torch was startling in its brilliance. Needless to say there were hundreds of better-known varieties doing equally well.

I reached Concord the same evening, in time to get a twilight glimpse of the Graves garden; and the first thing I saw was Jane



Phillips, looking very blue in the evening light. It is larger and a little darker than its parent Helen McGregor, but to my eye does not have quite the same degree of ruffled charm and refinement. It is a fine iris, however, distinct from any other blue, and well worth introducing. Near it were a number of sister seedlings in every shade of blue and blue-white, and every size, height, and style of branching. Most of them looked good, both then and in the less flattering light next morning.

Dr. Graves has so many blues and whites of related parentage, with strong closed standards and wide, wide, wide falls, that it would take years of study to appraise their relative merits; and by that time he will doubtless have more and better ones, if that is possible. Fortunately for other breeders, most of them have a strong family resemblance, and so compete largely with each other. He has many that may in time compete with Helen McGregor, Jane Phillips, and Lady Boscawen, but he has no blue resembling Blue Rhythm or Blue Valley, and no white resembling New Snow. Not that his are inferior; they are different in style. Most of them show clearly their inheritance from Purissima and Cloud Castle.

In the same way, most of his blends and yellows show their relationship to Katharine Larmon. Of the blends, Lady Louise was most striking, apparently a fast increaser and good bloomer. There were many ruffled yellows of intense color, with bright orange beards, the best of which, called The Spartan, will doubtless be introduced. Dr. Graves gets marvellous growth, height, and bloom, both on his own things and on those from other growers. I have never seen such height and size on Louise Blake, Lord Dongan, Loomis' V-20, and especially Master Charles. Red Torch, Esquire, Black Banner, and Auburn were among the most striking of many fine varieties on view. Most of his collection is still in the town garden; only the new seedlings were blooming at the farm. They were being subjected to a ruthless weeding out, but many of those that had been reprieved gave promise of finer things to come.

## CALIFORNIA COMMENTS

*From Harold I. Johnson*

Chivalry (Wills, 1944); Worthy of the highest award that can be given it.

Dreamcastle (Cook, 1943); The branching leaves something to be desired, but the color, shape and size of the flowers makes this one of the best of recent introductions.

Chamois (Klein, 1944); Dull in color effect, but otherwise on the pleasant side.

Chrysolite (Milliken 1941); For those who can grow it, the best cream colored iris on the market.

Cordovan (Klein.—); A fine flaring flower, and the name really describes its color.

Good News (Klein, 1946); In garden effect, this is far superior to its sister seedlings, Chamois and Bryce Canyon.

Oklahoma (Mit. R. 1945); A fine, distinctive flower with good growth characteristics. Since it is almost a self in color, there is no reason for tarring this one with the plicata brush.

Edith Rorke (Smith. R. 1945); I like plicatas, and this one introduces a new note in blue stitching.

Premier Peach (D. Hall); Good, but a trifle colorless.

Anna Williamson (Cook 1946); A beautiful, refreshing, pink bicolor, but needing better branching.

Salamonie (Cook 1946); Very much like Pink Reflection, and thus a bit faded in California.

Butterfly Wings (White R. 1945); For the irisarian who collects freaks, I nominate this as most outstanding.

Jasmine (Grant. —); Although this may be as poor in California as Fort Knox is in the East, they are both top-ranking iris in their own balliwicks.

*From George Wedgewood, Brentwood*

Amber Gem. Really a stand-out. Rich and glowing in color, heavy substance, slightly ruffled, medium height.

Azure Skies and Buttercup Lane. Both short of stature as usual but beautiful flowers in their respective color classes.

All were seen at Salbach's.

Berkeley Blue. About as blue as an iris should be, flowers large and of fine proportion. Falls flaring and slightly ruffled; branched



a bit high but quite outstanding and can't imagine why it has not received more attention,—unless of course it is another California iris that does not do so well in the Eastern States.

Bright Melody. Lives up to its description, but as it bloomed here the branching was a bit high.

California Peach. A subtle blend attractive in its class on newly opened flowers, but fades badly and is unattractive in a clump.

China Rose. Medium sized orchid lavender with clean haft but weak substance and blooms floppy.

Chivalry. Disappointing to me—perhaps I just don't care too much for the medium blues. The flowers were large and ruffled with good branching but the branches as I saw it here tended to hug the stem a little too much.

Cigarette. I still think this tops in the creams. Really in comparison with other so called creams it has an ivory finish. Has good height and branching and good carrying qualities in the garden for an iris of this color.

Claret Velvet. I still like this one for its richness of color and clean haft, good substance and fine garden value.

Gay Seniorita. Never did care much for this one, but it appeared even coarser this year.

Lady Mohr. Better than ever. This iris intrigues me. It is delicate in coloring and yet bold in form and carriage. It stood a good 36 inches tall with good wide branching and flower placement. Am still waiting for the price on this one to come down to my range.

Did not see Louise Blake or Sultan's Robe this year. Previously the former was far too short and the flowers rather small, but Sultan's Robe was a rich and beautiful thing as I recall it last year.

Moonglo. A dull and uninteresting blend with good form and ruffling but with speckled haft. I can get along without this one.

Mrs. J. L. Gibson. A new one to me. Tall clear dark blue with clean haft and ruffling or heavy waving of falls. Good branching. Really attracts attention.

Mulberry Rose. Gorgeous for coloring and size, but this year the substance was weak and don't believe it would stand much weather if these blooms were representative.

Rose Pearl. Just about as pink as an iris should be. Good form, substance and branching. Medium to tall. Salbach had several plantings of this around his garden and it really attracted attention.

Solid Mahogany. Not as large as I recall seeing it in previous years, but rich and beautiful altho not too tall—in fact a bit short of stalk.

Spindrift. Somewhat better in size and substance than I have seen it before (still short in stature). I can't decide whether the flower is really pink or not because that bright harmonizing beard steals the attention. Probably its greatest value is as a breeder as to me it is a most unpleasing color combination.

The Admiral. Clean hafted, flaring, slightly ruffled medium dark blue. Good but lacks something that would make it a first rater with me—may be the color.

The Red Douglas. Only a few blooms out but as rich and fine as most of the newer so-called dark reds.

Seashell was a slightly pinker Melitza with about the same form and substance, which isn't saying too much.

## IN CENTRAL CALIFORNIA

WILLARD I. PANKOST

The time available this season, along with my own garden, did not allow for visits to other than my own district. So, just a few notes on my personal observations. Again the early part of this season, China Maid, Snow Flurry and Purissima were the first to appear, along with Mr. White's Sheriffa and Fair Enough.

Iris Nada (crested), (Giridlian), a note should be made for those who have a shaded location. Nada's blooms start in late February and bloom for two months. The only requirements are shade, no cultivation, compost (even leaves) and plenty of moisture. They cut well and last two weeks in the house.

Bronzed Copper was very good on established clumps but it fades a little on the third day; if planted in part shade it will be fine.

Mellowglow again this year proved it can take it. It has color and height both in Sacramento, but at Berkeley it has color but not quite the same height. Ola Kala (with Berkeley Gold a close second) is still the best here.

Ola Kala, Elmohr (with blooms nine inches across), Gay Seniorita and Solid Mahogany, all have good color and height in the valley



and all do equally as well at Placerville. At Berkeley they have as good or deeper colors, but lack the height of the valley bloomstalks.

Lady Mohr was very good at Placerville and Berkeley, but for some reason did not perform well at Sacramento. I have admired Lady Mohr since introduction.

Mr. Salbach's Brilliant Amber and Amber Gem were very good at Mrs. Pollock's, Brilliant Amber being the better of the two; and at Berkeley in his own garden grown with his new California Rose, they were all very good. All three are new and created lots of excitement. All three are on the blend shades.

Prairie Sunset does very well here and in all parts of the district; it is another blend that can take it, but is benefitted a little by afternoon shade.

Gay Senorita did not bloom for me last year, but made rapid increase. I divided it into two plantings and this season it really produced. One planting of two rhizomes had three perfect bloom stalks forty inches tall and the original clump had three also. It was also good at Placerville, but lacked height at Berkeley.

Pacific Sunset (Salbach) was tall both at Sacramento and Berkeley, but lacked color at Sacramento. Old Lace had height at Sacramento, but the color was washed out, whereas at Berkeley it had both color and height.

Mulberry Rose (the name is very appropriate) was very good on established clumps. The color is a little on the Elmohr shade and stands the heat well. The flowers were large with good substance on tall well branched stalks.

Great Lakes was very good. This iris seems to have the all around quality. Icy Blue along with Arctic were quite tall and lots of their stalks have to be staked.

Except for China Maid the pinks had a bad year here. Melitza did not produce enough stalks on established clumps. Flora Zenor was good only at Placerville. Salmonette (Sass) the only new pink that even looked fair, was on a one year clump. Dream Girl and Overture (Hall) had good substance and texture, but the blooms were small and the stalks short. Perhaps another year will correct this fault.

Radiant Lady (Maxwell) on the orange bicolor shade, was indeed an improved Radiant, not tall (thirty inches), but one bloomstalk produced fifteen blooms with lots of substance and texture. It should be taller next year.

Grand Canyon was very good here and stands the heat well.

Of the Plicatas I observed Blue Shimmer, Minnie Colquitt, Royal Scot, Firecracker and Advanced Guard. Blue Shimmer is still the best, Minnie Colquitt the most popular with garden visitors, and Advanced Guard the tallest. The bloom stalk was fifty four inches tall and needed no staking. It had five branches which gave the blooms a perfect display. They all do equally well in the whole district.

City of Lincoln had an exceptionally good year. Amigo along with Wabash are still very popular and Amigo does well here, if transplanted or thinned every other year.

Three Cheers does not branch well here; I have only seen it at Berkeley so far.

Tobacco Road and Oregon Trail were quite late this season, and looked equally well in all sections.

Mexico, an addition to the late bloomers, is just about like the colored cuts in several of the new catalogs. This iris is one that has not been over-rated or advertised. It created lots of comment, and the perfect flowers, well displayed on strong stalks, last three days without losing their color.

Rubient, the last Pogon iris to bloom in my garden, was very good.

For those who like arrangements, some of the Louisianas should be added. Mine were not as good this season, as all were transplanted. They bloom here from mid-season to late and come in most all colors.

The Siberians are greatly admired by most visitors and do equally well where I have seen them grown.

For a last notation—our season was very hot with the temperature on some days as high as ninety-three degrees. The blooms all came out at one time, which made the season short. With some heavy winds also our season was at least two weeks shorter than usual in the valley.



## IN KANSAS, MISSOURI, AND ILLINOIS

*David R. Kinnish, O.S.B., Kansas*

My most lasting impression of the 1947 blooming season is that it was probably the most hectic one we have had in several years. Our season was later than usual because of the long, wet spring. There was a wealth of bloom, but rains and storms throughout the season came at almost twenty-four hour intervals and kept many of us from seeing the bloom even in our own gardens. Flower stems, usually tall here, were even taller than usual and they suffered in the wind and rain.

Iris trips took me to Wichita, St. Joseph, Kirksville, Mo., and Evanston and Techny, Ill. Other trips into Nebraska and Iowa had to be cancelled because of a frost in that area on May 28th.

In Wichita John Ohl and his mother were hosts, on May 18, to a gathering of iris fans that came from all corners of Kansas and from Nebraska, Missouri, and Iowa. There we met the Winnes, R. L. Lyell, the Carl Schirmers, Dr. & Mrs. Schirmer, Mrs. Whiting, Mr. & Mrs. Larry Gaulter, Dr. Ernest Svoboda, Mr. & Mrs. Bernard Ulrich, and a host of other fans from Wichita and surrounding towns. The garden teemed all day with visitors taking notes and getting kodachrome shots, exchanging ideas, and just talking. At times the crowd was so large that it was almost impossible to get around to see things. The Ohls served a delightful dinner to the out-of-town guests and then we made the rounds of the Ohl garden and of several other gardens in the city. There was so much to see that the day was all too short.

The blooms for the part showed the effects of the recent down-pour, but there was still a fine display, with some varieties really coming through in good condition.

On this trip the most interesting group of irises we saw in the Ohl garden were the William Mohr hybrids which John had segregated. In this group there were all of the named varieties currently available and quite a large number of seedlings from Dr. Loomis, Walter Marx, Prof. Jory and others.

At Hill's we were particularly struck by the exceptional vigor and wide branching of his own introductions such as Margery Springer, Betty Campbell and Melanie. In his peony beds it was

an exciting event to see the brilliant orange reds and carmine tones of the new Glasscock hybrids.

The following notes give the highlights of irises I saw here and there and I have arranged them roughly into color groups for greater ease in comparing them.

#### WHITES AND NEAR WHITES

Arctic Queen (C. O. Schirmer N.) Very white, with gold epaulets. This has extraordinary substance, good branching, and is an excellent performer. Saw this in Wichita right after a rainstorm and the blooms looked as fresh as if they had just opened. White Goddess (Nesmith 1930) was very good this year in the Ohl and Hill gardens. Here it always grows too tall for me and goes down in the wind. Stella Stedman (Covert) is a fine large white that should be better known. Snow Velvet (H. Sass 1942) is a very good looking white with yellow in the throat. It has better substance than many others and is not too badly affected by wind and rain. Master White (C. O. Schirmer N) is one that we saw under the number H129 last year. It is still my first choice among the whites for beauty of form, though I would like to see this and Spanish Peaks (Loomis 1947) and Lady Boscawen (Graves 1946) together for comparison.

Mr. Hill is always complaining about his "poor, thin soil," yet irises seem to grow bigger and taller for him than in most gardens I have visited. There was a stalk of Snow Flurry (Rees 1939) in his display garden that stood over four feet tall, and that was the first time I have seen it without its having the flowers bunched. It still was not well branched, but the blooms were well spaced and it looked grand, even after a heavy rain. This is one of the best substantanced whites and ranks along with Arctic Queen (C. O. Schirmer) and Priscilla (Whiting) in this respect.

I liked Snow Carnival (Graves 1942) best of all the introduced whites I saw this year, though Spanish Peaks (Loomis 1947) also appealed very strongly to me. Snow Carnival has excellent substance, nicely ruffled blooms and well branched stems. Spanish Peaks is one of the whitest whites to have nice form, large blooms and tall, well branched stems. It has a white beard and no yellow in the throat. Of the shorter, pure whites, Priscilla (Whiting 1942) is by far the best. There is nothing whiter among good hardy irises. When will someone introduce a pale blue and a good yellow of about



the same size and height to go with it? Patricia (H. Sass 1939), though not as white as Priscilla is also very good. The largest white I have seen is Howdy (Clevenger 1942). It made a very good showing at the Kirksville, Mo., show this year. Some consider Gudrun (Dykes 1930) coarse, but it is still the best and most dependable bloomer among those that have been thoroughly tested here.

### BLUES

The Admiral (D. Hall 1941) has always been good wherever I have seen it, but I like better Santa Clara (Mohr-Mitchell 1931), an older blue of the same color, with better substance, and beautiful ruffling. Its only fault is that the standards are a little open (not floppy though). Santa Clara makes a fine companion to Golden Spike. Strange that it has been overlooked all these years. For beautiful form, excellent substance, and good performance Lake Breeze (Fay 1945) is hard to beat, but the color could be better. Azure Skies (Pattison 1943) is a very fine light blue. My choice among the medium blues is Chivalry (Wills 1944). It has all the good qualities one could want, including good clear, color. Margery Springer (Hill 1946) is a pale blue that really looks blue and not blue-violet. It is not large, but it has good substance and is widely branched on plants that grow vigorously. I much prefer it to Gloriole, which is not blue, and to Icy Blue, which often winter-kills here, and even to Sylvia Murray (Norton 1944) which is not as blue as Margery Springer. Pale Dawn (Fay 1947) looks white to me, with a suffusion of blue-violet. Stratosphere Blue (Lyell 1946) is the best large blue bi-color I have seen, with clear-cut contrast between the light blue standards and deep blue falls. A fine flower done in clean colors. This might be classed as a neglecta.

### CREAMS AND YELLOWS

Ola Kala (J. Sass 1943) is still tops in the deep yellow class, though it has some close competitors. Derby (Ohl 1942) larger than Ola Kala has better stems and very nearly as good color. Golden Spike (Whiting 1940) is one of the richest of the big yellows with a lively orange beard. Berkeley Gold is another fine deep yellow, but topped here by Ola Kala, Goldbeater, Derby and others that seem to do better. I liked Goldbeater (Kleinsorge 1944). It looked very fine to me with its large blooms and fine, clean hafts.

The most attractive new yellow I saw this year is Xantha (Fay 1947). If this proves as good everywhere as it was in the originator's garden it is going to be hard to beat. In the medium yellows Ace High is large in size, has good color and good stems. I cannot understand how Klondyke Gold (Kirkland 1941) missed winning an award when first introduced. The judges must have been looking the other way. It is still fine in the large medium yellows. Fortune (Kleinsorge 1944) is very rich and has excellent garden value. It was one of the few that still looked good after a heavy rain in Hill's garden. Among the creamy yellows Golden Treasure (Schreiner 1936) still looks very good to me. Desert Song (Fay 1946) is a fine looking cream that is a very good performer and it may well displace Golden Treasure. Larger than either of these and better formed is Glory (Kinish 1947). It has the disadvantage of being shorter and not such a good performer, but the beautifully formed, extra large blooms are some compensation.

We predict that within the next few years Dr. H. W. Schirmer will have something quite distinctive in yellows, pure, unmarred chrome yellows with a velvety finish, and extra heavy substance. He has been carrying this color through several generations of line breeding and is at last obtaining some seedlings with good size and nice form.

#### NEGLECTAS AND AMOENAS

This is a class that definitely needs improvement along with the amoenas. Little that is really new and better has been produced in the past few years. Lothario (Schreiner 1942) is easily my choice over Amigo and Louise Blake because of its larger size and clearer color contrast. Carl Schirmer's seedling R968 is probably even better than Lothario because it is brighter, though it is not as large. I saw nothing new among the amoenas. Extravaganza was not blooming either in my own garden or in others where I saw the plant. Perhaps it needs a year to become established, or, more probably, because of the heavy demand, dealers are selling plants which are too small to bloom the first year. Grinter Amoena (Grinter 1938) looked nearly as good as Wabash to me and I wonder why it did not prove popular in a class that has so little competition.

#### PPLICATAS

John Ohl named Late Sunset (No. 807) this year. In form it is



better than any other yellow ground plicata I know and it is my choice in this class because of its broad, nicely flaring falls and good color pattern which is similar to Firecracker. Tiffany has been the best performer among the yellow ground plicatas for me and I like it better than Balmung, Ruth Pollock, or Coritica. Blue Shimmer is very good for light blue garden effect. Minnie Colquitt (H. Sass 1942) is another fine plicata, its one defect being that the falls tend to curl. If you like irises for cutting there is a real treat in store in a little, dainty, white-ground plicata peppered with reddish brown, on well branched stems of medium height which Hill will probably introduce soon under the name Friscoette.

### PINKS AND BLENDS

There is no reason in the world for combining these two classes except that that is the way I have them in my notes. Remembrance (D. Hall 1942) is an excellent blended pink with golden throated, large, well formed blooms on good stalks. Better than this is Golden Russet (D. Hall 1946) with its tall, well branched and strong stems and extra large blooms that have substance. Saw this one in Ohl's garden after a heavy rain and it still looked good. Harriet Thoreau (Cook 1944) does not appeal to me, except, possibly, as a breeder. California Peach (Salbach 1941) has weak stems here and fades in the sun. Sunset Serenade (J. Sass 1943) still looked surprisingly good after heavy rains. Carl Schirmer's two blended pinks (not yet introduced) Rose of Heaven and Bright Wings are sure to be well liked. Rose of Heaven is medium toned rose pink and Bright Wings is a few shades lighter in color. Both have extra strong, well branched stems and both are very good bloomers, with eight or more blooms to the stem. Veishea (Whiting 1943) is another fine rose pink with a dashing blaze of violet in the falls. Grand Canyon (Kleinsorge 1949) also had an attractive violet blaze below the beard. Mulberry Rose (Schreiner 1941) is outstanding in any garden and it is distinguishing itself for its excellent performance. Better be careful where you plant it though as its color is something to reckon with. Grace Ballard (H. Sass 1943) has, it seems to me, been much overlooked. It is a very good blended pink. Bernard Ulrich, who grows a few seedlings now and then, named his first one this year, Carolyn Louise, a very attractive, big, broad petalled flower with burnished gold standards and Caldera brown falls (Dictionary of Color). The color is much brighter than the

description would indicate. The most exciting new seedling I saw this year is Carl Schirmer's R756, a glowing, very bright pink blend that came from Aztec Copper  $\times$  Midwest Gem. The standards are golden tan with reddish tints and the falls are pinkish tan set off by a very rich gold beard. The blooms are medium in size and the stalks are neither tall nor well branched, but branched enough to keep the flowers from crowding. In spite of its faults this iris is so attractive that it should be named. There is nothing brighter in irisdom.

#### SHELL PINKS

Whether you call these "seashell," "congo," "cameo," "flamingo," or just pink-bud irises, they all seem to fall into the same class and it is very distinct from the other pinks. One of the pinkest I saw is Dream Girl (D. Hall 1944), but, as I saw it growing in Wichita and in Missouri the blooms were small and not too well formed. Overture (D. Hall 1944) is a little larger, lighter in color, with a little yellow on the outer edge of the haft. Leilani (Washington 1943) I do not like—too much veining. Salmonette (J. Sass 1946) is deeper in color than Dream Girl, leaning toward salmon pink, with a broad, rich tangerine beard. Still a little lacking in size. Loomis SQ72 definitely stood out as the best of these pinks in John Ohl's garden where most of the named ones were there to compete with it. Best of all I have seen in this class I liked Hall 46-14. It has large, ruffled blooms in a medium tone of "flamingo" pink, with a rich tangerine beard. Hall 46-16 is deeper in color, but not as large nor as well formed. It seems to be a characteristic of these pinks so far that, the deeper the color the smaller the bloom and the poorer the form. This is one for the geneticists to unravel. Hall 46-30 is the largest and, in some ways, the best looking of these pinks. It is paler in color though, and the beard is sparse.

#### REDS

Christabel (Lapham 1936) is still my choice of a good all around red that can always be depended upon to bloom. Flamely (Cook 1943) looks like one of the best to me. It stood our winds and rains. A very attractive, warm brownish red is Cedar Rose (Whiting 1941). Aztec Glory (Horton 1941) has large, coppery red blooms on tall well branched stems. This has good garden value and looks like a deep pink from a distance. I like Red Valor (Nicholls 1939)



better than The Red Douglas, which has proven very undependable for me, blooming only once in three years. Among the brightest of the new reds I saw this year is The Chieftain (Clevenger 1946) with average sized blooms of bright coppery red, displayed on strong, tall stems. The best of the red-purples I have seen is Asta Schirmer (H. W. Schirmer N.) with its extra large, well formed blooms on good stems. Solid Mahogany (J. Sass 1944), though one of the best of the dark reds, looks a little somber to me.

## FROM COLORADO

*Mrs. F. E. Winegar*

Our visit to the garden of Mr. and Mrs. Newman of Denver was somewhat early in the season to see the bloom of a number of the newer things they had recently planted but among the better established Iris that were in bloom a large clump of Three Oaks stood out in importance. Sable and Elmohr were in good display while quite a number of older varieties such as Jean Cayeux gave evidence of their still good garden value with Russell Lupines and a choice lot of early flowering perennials. Mr. and Mrs. Newman are much interested in many seedlings they are developing. Of especial interest in this garden was their cultural practice of spreading deep mulch of partly rotted leaves between the rows to conserve moisture and protect the soil from much tramping. Our intention to get back later for another visit was defeated.

In the lovely garden of Mrs. Milton G. Hodnette of Denver where Iris grow in a beautiful setting of fine hybrid Lilacs, Evergreens, Roses, Clematis and a very rare collection of Peonies, again the garden value of many good Iris was especially evident; Miss California very tall and lovely and early enough to complement the color of late pink Lilacs. Spun Gold, Sable, Elsa Sass, Jake, Elmohr, Snow Flurry, Spindrift, Red Amber, Daybreak, Mexico and many others were making a grand display. Spindrift (Loomis '44) is an exquisite seashell pink, nicely formed and having a very heavy substance. The veining of lavender on the falls is not unattractive and the flower stays in good condition for many days without fading. Red Amber (Loomis '42) is more rose than red. It is not brilliantly colored but there is an attractive amber glow throughout the flower. It is nicely formed and beautifully finished.

The garden of Mr. P. H. Graham of Denver is a wonderful exam-

ple of what good planning and arrangement can make of the average sized city lot. So complete from the small basement window greenhouse of redwood where he starts such lovely things as tuberous rooted Begonias, to the small compost corner well hidden by a few choice varieties of grapes it has everything a garden could possibly need. There is room for fine Lilies and good Roses, many species Iris, Peonies, Lupines and Pillar Roses and a very beautiful display of bearded Iris. Nothing is crowded and his arrangement of Iris is particularly well done, giving an example of the good use of Iris in the small mixed garden that could well stimulate a wider use of the flower for the city garden. Elmohr was very good, also Red Amber and Grand Canyon among many well chosen older varieties.

It seemed that many others were of similar mind when we visited the J. D. Long Gardens at Boulder, for throngs of people swarmed over the vast gardens and even a quick mountain shower did not discourage them for long. Here in great fields and seemingly endless rows are congregated much of the aristocracy of Irisdom. It is a decided advantage to be able to see the newest things in quantity when many gardens have at most a single plant or clump. Here could be seen all stages of bloom in quantities to judge mass effect as well as individual flowers. Long rows of Great Lakes beside the rich yellow of Golden Spike with an equally long row of Prairie Sunset on the other side would make anyone wish to grow these lovely things en masse. Later on we came to a long row of Lady Mohr with many clumps of bloom open. Lady Mohr (Salbach '44) is a most exciting flower, perhaps more of a connoisseur's flower, very exotic, with standards of oyster white and falls of chartreuse. The haft is marked with veining of pure gold which merges into the typical Onco veining of lavender on the falls.

We would give Lady Mohr a special setting in the garden beside a garden seat or path where her unusual beauty could be enjoyed often but would not plant this Iris in masses. Elmohr was much in evidence in huge blocks near the entrance and again farther back. It makes grand blocks of color.

Masses of Sable and Deep Velvet emphasized their richness of coloring and their value in planting. Three Oaks was very beautiful, richly colored and tall. It is a grand Iris from every standpoint. Sonrisa is a nice smooth coppery pink with a metallic lustre and fine flaring form. Gallantry and Chivalry were growing side



by side, both deep blue selfs of fine carriage and flaring form, Galantry exceedingly ruffled, Chivalry somewhat bluer in tone.

Chamois, Cascade Splendor and Bryce Canyon are a lovely triad among Dr. Kleinsorge's introductions. Chamois is well named, as smooth and soft in color as chamois skin. The substance is good, the falls somewhat flaring and ruffled. With its smooth coloring and satiny finish and wide petals without marking it is a most interesting flower. It is not dull. Cascade Splendor is still more richly colored. Its glowing copper henna blend carries across the garden. Oregon Trail has more yellow with the copper but carries well too. Ranger and Mexico are both good reds; Ranger a grand deeply-crimson self while Mexico has more brown and amber in its coloring and more contrast between the standards and falls. Both have good size and form. To me Grand Canyon seemed somewhat dull whenever I saw it, possibly by comparison with so many brilliant blends and hues. Daybreak has pleasing color and form and is ruffled somewhat. I had thought it would have more pink than gold in masses but the gold seems to predominate in strong sunlight. Tobacco Road is very smooth like Chamois but a richer golden tobacco brown. Its flaring form, heavy substance and smooth coloring are very pleasing. It is certainly not dull in the garden. Still newer and very richly colored is his Good News. This is a luminous, rich old gold with very broad petals and heavy substance. Goldbeater is a nice large chrome yellow self, clean and smooth.

Amandine (Douglas '46) was very lovely. It is a most refreshing flower, a cool, crisp ruffled pale lemon yellow self with wide falls and beautiful form.

Amaranth (Whiting '42) is a well formed, smoothly finished beautiful self of a most pleasing rosy purple. It is a lovely garden color and quite different.

Arab Chief (Whiting '44) was not in bloom in the Long Gardens but came out later in mine and I have grown it in Omaha and seen it in the Whiting Gardens. It is late and tall and brings its glowing burnt orange hue to the garden after most things have finished, so is doubly welcome. It is generous with its bloom and its brilliant color never fails to bring comments.

Azalea (Nesmith '46) is a lovely pastel pink with a tangerine beard and deeper color in the falls. It is a smoothly finished flower.

Azure Skies (Pattison '43) was in beautiful bloom. It is one of the most delightful of the light blue iris, having wonderful sub-

stance, very ruffled and flaring form with wide petals, all of which, with its purity of color, make it indeed one of the finest flowers in this wanted color.

Bandmaster (Hall '44) is a very large flower, deeper in tone than light blue but not dark. It holds its color well and has good substance and branching. The falls seemed a bit long to me but the color is very good.

Bagdad (Whiting '46) is a Garden Glory done in yellow and metallic lustre. Its form and smoothness are very reminiscent of the smooth finish of Garden Glory. The standards are an unusual tone of waxy yellow and the falls so thickly overlaid with a brassy sheen they seem almost velvety. The substance is outstanding and no amount of bad weather seems to mar its perfect finish.

Billowy Sea (Norton '44) is a beautiful frosty light blue, large with good form and substance.

Black Forest (Schreiner '45) "the darkest Iris" is very, very dark blue-black, but it is not dull. Its smooth pure coloring and rich silky texture with reddish undertone give it a glowing quality.

Black and Gold (Kleinsorge-Salbach '43) is a most unusual variegata. Standards are a golden yellow, the falls a velvety deep maroon, almost black. It has a most interesting narrow band of the deep maroon outlining the edges of the standards and even the styles.

Blue Rhythm (Whiting '45) was not out yet in the Long Garden but came out later in my own garden. Mrs. Ricker and I were in the Whiting Garden the morning Blue Rhythm opened its very first bloom to the light of day. I well remember how interested we were as we watched it through the morning unfold to its wonderful perfection of form and color. Two seasons later the blue seedling (4332) which we had taken copious notes upon had become Blue Rhythm and we saw it in a large planting gloriously fulfilling our highest expectations. It is very blue, neither pale nor dark, but a pure cornflower self with no slightest marking to mar the wide haft. Even the beard is blue. The falls are wide and flare slightly and the standards are full, well arched and domed; the substance is very heavy. The texture of the flower is unique and there is a definite overtone of silver. Blue Rhythm is like no other blue Iris.

Blue Zenith (Whiting '42) and Annabel of the same year are both good blues. Blue Zenith a very large sky blue self and Annabel a smaller very clear lighter blue self of good grooming. While



they are both good garden blues their chief claim to fame is of course that Annabel is the pod parent and Blue Zenith the pollen parent of Blue Rhythm.

Buffawn (Andrews '40) is a unique blend of buff and fawn with a distinct tone of pastel pink emphasized by the deep tangerine beard. It is softly colored and interesting.

Burmese Gold (Whiting '45) is a glowing blend of pink, yellow and pure gold so smoothly combined it seems almost a self. It has a luminous quality that gives it great garden value.

Cedar Rose (Whiting '41) was not in evidence in the Long Gardens but I have known and used it much as one of the most valuable for its nice form and color note of pleasing brown-red at the front of plantings where very tall varieties are not practical or good.

Cloth of Gold (Whiting '45) stood out with distinction. Its deep yellow self, glowing orange beard, nice flaring form and heavy substance with wide branching make it an exceptionally fine garden subject.

Garden Flame (H. P. Sass '41) is still a favorite red. It is a pure self of rich garnet red with wide petals and flaring form. It is an Iris of very high quality and great garden value.

Garden Glory (Whiting '43) is the smoothest, richest and most finished Iris I know. Its pure self of glowing ruby red is not marred by the slightest veining and the beard of bronzy red makes no unpleasant contrast. It is finished in smooth satin of very heavy substance and has the sheen of a polished jewel, rich and glowing. It is indeed a gem, and the smooth finish never seems to be injured by bad weather.

Gypsy Rose (Whiting '46) is a most distinctive Iris, very tall; and while the flower is large it is most beautifully formed with wide petals, and has heavy substance and widely branching stalks to carry the large blooms. The color is a rich, warm hellebore red with a copper infusion, and a touch of blue at the tip of the beard. It is a magnificent Iris.

Helen McGregor (Graves '46) was in beautiful display at the Long's, the first time I had seen it. My instant reaction was "well no wonder," for Helen McGregor has such complete beauty of form and purity of color that it is easy to see why this Iris has won such universal applause and why it rates it. The flower is large, the broad petals ruffled, the color a very pure light blue, the stalk is

strong, the branching exceptional and the ensemble—completely satisfying.

Katherine Fay (Fay '45) is a nice, large, very ruffled pure white with good substance and well branched stalks.

Lavender and Gold Lace (Whiting '46) was looking very attractive. I have admired this unusual Iris in the Whiting garden for a long time and am glad to see it introduced. The combination of golden standards and lavender falls with a definite edge of frilly gold lives up to its name.

Lake Huron (J. Sass '42) is a large medium toned blue, bright and attractive across the garden. The falls are rather long.

Lake Shannon (DeForest '45) is another medium toned blue, broad petaled and ruffled. It is completely covered with veining of a darker blue that gives it a deep overcast.

Lynn Langford (Hall '46) is a beautiful smooth pure toned orchid pink. It has a glowing yellow throat and no veining. The beard is orange and the form and substance of the flower are both good. There are too few good Iris in this lovely orchid coloring.

Master Charles (Wmsn. '43) is a very rich glowing reddish purple or mulberry with dark beard, no haft markings, and has a nice flaring form and smooth velvety finish.

Melodist (DeForest '46) a rich new blend of henna and golden brown, shines like burnished copper. The flower is large in size and somewhat flaring with unmistakable garden value.

Mission Madonna (Essig '46) is a very large cream with yellow on the haft and deep yellow beard.

Mellow Glow (Whiting '42) in a row carrying its lighted candles seemed to light the garden. Exceptionally well named this glowing blend of amber yellow, peach and apricot with wide petals is a welcome glow to any planting.

Moontide (McKee '46) is a large, well formed, pure rich yellow self of high quality. The falls are thick and velvety and the beard is orange. It has good substance and branching and the petals are very broad and smoothly finished.

Nylon (Whiting '40), not new but a most pleasing flower, is in bloom over a long time, being one of the first to come out and its soft tones of golden tan are always a welcome note in the garden.

Ola Kala (J. Sass '43) in a long row at Long's makes no apology for its tremendous popularity. Its depth of color, its pure self of





***ALPINE GLOW***  
*(Klein. '45)*

ever, its white beard and beautiful flaring form give it a distinction not surpassed by any white Iris. Priscilla was tall in the Long's gardens as it grows in mine and as I have seen it many times. I can see no reason whatever for classifying it as an intermediate, at least from the standpoint of height.

Rainbow Room (J. Sass '46) is a large, very rich copper blend with a veritable blaze of color on the falls, violet, blue, rose, in a rainbow blend. The flower is shaped much like Whiting's Veishea.

Remembrance (Hall '42) is the largest of the shell pinks I have seen. It has a soft creamy overtone that sets off its pure pink coloring. It is a very lovely flower.

good substance and form make it stand out with distinction wherever it is seen.

Pale Primrose (Whiting '46) is a very lovely tall late yellow of exceptional form and heavy substance. The petals are extremely wide and the color is a soft, cool pure primrose yellow. It is at its best long after everything else is gone or nearly so and the heat does not seem to bother it. I did not see this at Long's but have enjoyed it in my garden as W. 4057 and am glad to see it introduced.

Patrice (DeForest '45) is a refined plicata of beautiful form with markings less objectionable than many plicatas. To those who dislike heavily marked plicatas Patrice will be welcome. The standards are light cream and the pattern on the falls is done in soft rose.

Priscilla (Whiting '42) is still a most outstanding white. Its purity of color, a clean pure white with no markings what-

Rocket (Whiting '45) is an outstanding flower of heavy substance with wide petals and beautiful form that seems to be skyrocketing to fame. The standards are pure deep chrome and the falls are a deeper orange chrome that comes almost to the edge. It is a striking flower in the garden. The stalks are strong and well branched.

Rouge Bouquet (Whiting '41) is a happy blending of rosy red tones, crimson and ruby, into a rich flower of heavy substance and flaring form. Like Cedar Rose and Veishea it is a priceless garden subject for the front of the border. It always attracts a great deal of attention.

Rubient (Whiting '42) is a very rich, deep and glowing red purple with very velvety falls edged with a band of the color of the standards. It is a medium sized flower but intense in its coloring, makes a good show in the garden.

Russet Wings (Wills '46) is a new glowing copper and gold blend, smooth and very rich; its form ruffled and flaring. It is a very fine flower and exceedingly well named.

Sharkskin (G. Douglas '42) is a fine heavily textured smooth white of good form with broad petals and a flush of yellow in the throat. The beard is yellow and the branching is excellent.

Tea Rose (Whiting '44) is one of the most satisfying of the pink blends. Its lovely pink tones are blended with amber for warmth and there is a warm glow in the throat. There is a small flush of blue on the falls and the flower is round and flaring in form with wide petals.

Tiffanja (DeForest '42) is a fine clean looking plicata of buff yellow with golden brown markings. The flower is large and the branching good.

Vatican Purple (Whiting '43) was not out at Long's but has been a favorite with me since its introduction and I checked it again in my own garden later. The purest self of rich dark blue purple, its finish is so satiny smooth and glossy and its substance so heavy that it takes everything the weather has to offer without marring or spotting. The flowers are large and beautifully formed and remain in good condition for days. The branching is good. Vatican Purple is one of the finest Iris for the garden that I know.

Veishea (Whiting '43) was growing tall and lovely at Long's. Its blend of copper and rose with a blue blaze on the falls was a bright spot of beauty. Its substance is very heavy and it keeps in good



condition for a long time. The flower is large and the form good. Veishea is another grand subject for the front of a planting.

Wild Honey (Whiting '46) a rich golden tan showered with glistening gold is another long admired seedling in the Whiting garden that is a most welcome introduction. It is quite different in color and form. The flower is large and the petals broad, and the branching is very good.

There were so many things still not out at the Long's that we promised ourselves another trip over but weather and other considerations prevented much to our regret.

I note with great pleasure the Whiting introductions for '47 and recognize Campfire Glow and Lilac Lane as two among four that Mrs. Ricker and I selected in 1945 as supremely outstanding. Campfire Glow as 4370 when I first saw it was growing beside a spectacular tall coppery red No. 4362, which the following year became Gypsy Rose. Growing beside Gypsy Rose it would have to be good to be that good—and it is. My notes call it a metallic red with copper lustre of heavy substance and good form, Mrs. Whiting's description is much better. We are glad to see it introduced and so well named.

Lilac Lane (Whiting '47). As No. 4277 this was another of the four highest in Mrs. Ricker's and my selection in 1945. This I am sure was my own very first choice as its heavenly pink-toned lilac color, a pure self, delicate but not strong in color, unbelievably heavy substance, its wide flaring falls, and the widely domed standards seemed to me to have everything I could desire in a flower. Another one of the four we are still watching as 4240, as fine in pink as Lilac Lane is in its color, and hope it will be introduced very soon. It is a majestic flower.

Mexican Magic (Whiting '47) topped everything in the garden for sheer brilliance of color in hues of red, copper and blue.

Nankeen (Whiting '47) is a very tall beautifully tailored flower of heavy Chinese yellow silk, fresh and lovely, a fine flower of great distinction.

A trip planned to Colorado Springs to see Dr. Loomis' garden was spoiled by a snow storm (the latest ever recorded here) but this is a pleasure we have in store for next season together with a more complete check of local gardens.

## AMONG THE EARLIES

*Melvin G. Geiser*

Being intensely interested in dwarf iris and the early blooming varieties both intermediates and regular tall bearded, I dropped work early in May and headed toward southern Kansas where the Iris season is from one to two weeks more advanced than here at Beloit.

Our first stop was at West Side Floral Garden, Hutchinson, Kansas. Then came the Morningside Iris Garden, where it was discovered that wife, husband and children run a flourishing local iris business dealing principally in TB iris and glads. A charming personally landscaped garden enclosed with Chinese Elm hedges, purple leaf plum and lilacs provides an ideal background for the iris plantings. A goodly number of perennials such as chrysanthemums, perennial phlox, hardy carnations, lilies and columbines are intermingled to give accent and variety to the plantings. Some breeding is being done by Mrs. Ramsey and accurate labeling and records are kept. One bright canary yellow seedling, an improvement over either Sangreal or Southland for brightness, form and early blooming qualities, grew about 27 inches. Further testing may indicate registration and introduction for this one fine seedling. Only a few dwarfs were being grown, for local interest in these plants was lagging.

The third stop was Mrs. Lulu Stapleton's whose hobby is the hybridizing of dwarf iris. Her goal is to secure a good white and a good pink double tall bearded. Subject to further testing is a white dwarf seedling from Yellow Frills.

Nearby a visit was made to the garden of Mrs. W. T. Clark, where one finds new and up-to-date iris varieties fitted neatly into a charming "2 x 4" backyard semi-formal garden.

In the east part of Hutchinson a stop was made at the garden of Mrs. Wilson, who is nobly carrying on the work of her late husband in bringing a large number of his seedlings into bloom. One can look for some unusual iris from the one-eighth acre of seedlings. One was a giant (the size of Mussolini or Buechly Giant) in a brighter coloration of the old-time Peaches but with five buds on well branched stalks. The fact that it was so early and blooming with the dwarfs makes it desirable as a tall bearded.



Continuing on to Wichita, we found Mr. Charles M. Fuller growing iris and tulips as a health restorative. A few fine true pinks have appeared but they lack size and good branching; further crossing may rectify these weaknesses. Of the early bloomers, Golden Glow was the garden eye catcher.

At 6:30 A.M. the following morning a trip was made to Mr. R. E. Ruse's well landscaped garden. Iris, Oriental poppies, roses and evergreens predominate in the planting scheme. Here one can view many of the old favorites as well as some of the choicer new items.

Locating the Ohl's Iris Garden was like trying to find a needle in a haystack. Mr. Ohl is buried amid the cluster of Boeing and Cessna Aircraft plants southeast of Wichita. It was noted that Johnny was dabbling in a large number of the onco crosses as evidenced by little white tags hanging from such blooms as Lady Mohr, Miss Muffet, Giran and a host of C. G. White's seedlings. Miss Muffet outshone Lady Mohr, the latter having less substance but firmer branching. Among other sorts catching the eye were Spotless—a spotless white, and Andalusian Blue with its pure blue color.

In spite of the difficulty of securing adequate and competent help, the H. M. Hill's at La Fontaine, Kansas, are carrying on with their large acreage of peonies, iris and hemerocallis. Here the dwarf blooming season was almost past but we sincerely believe no better modern dwarf iris can be found than the dark red Tiny Tony, the canary Keepsake and Tint Treasure, and the pink Miss O'Pink. As an eye-stopper Mr. Hill showed a non-registered seedling, a true almost crimson red dwarf about 7 inches tall, domed S., flaring F., wide fuzzy white beard, ivory styles with red ribbing, slight fragrance, and very little haft veination. It is worth an H. C. in anybody's money. Likewise Peshawar as seen here and in our own garden is worth an HM for there is no better IMB in the reddish bronze brown of the oncos or even in the intermediates; in addition it fills a definite early vacancy in this color class. Plant with yellows for an excellent color display. Also seen was the reliable canary colored re-bloomer Far South, more canary than either Sangreal or Southland and a better grower. For massing effect of an early bloomer, try Red Orchid; it cannot be beaten. Or, for repeat performance try Kansas Ingleside. Mr. Hill's gardens, tucked away at the southeast corner of the famed Kansas

Flint Hills, deserve an ever increasing number of visitors. As a side line some excellent peony species were in bloom, *Officinalis alba plena*, *rosea plena*, *rubra plena*, *superba* and likewise both the double and single forms of the red *Tenuifolia*. Mr. Hill is to be congratulated for bringing back to commerce these excellent early peony varieties.

Still rambling southeastward, we stopped at the "canyon-like" back yard iris garden of Mrs. Ida St. Helens, of Independence, Kansas. She has been rather too timid about some of her iris children. Two varieties registered in 1943 but not introduced are: *Blue Empress*, EE, 54 inches, medium blue, S. well domed, medium lavender blue F. lined darker, giant 9½-inch diameter blooms, 7 to 9 blooms per well-branched stalk. Never have we seen a larger bloom—only fault is its weighty flowers on such tall stems which require staking in an open location. The second, *B. St. Helena* (named after her daughter who is still an officer in the WAC), EE 42 inches, no fragrance, light old rose, domed S, red velour medium red semi-flaring F. with a little too much white veination, heavy orange beard, 5 to 7 blooms per stalk, is tops for an early iris in this color class. Later blooming seedlings of Mrs. St. Helens will bear close scrutiny by visitors for some new and novel developments.

Finally arriving in Missouri, we made a stop at the home of Mr. Emsley Sims, who showed us his small, compact iris beds in the rear yard. Conspicuous legible labels on each variety, while not pleasing perhaps to some, were a welcome sight, indicating that Mr. Sims is interested in accurately labelling seedling crosses as well as other varieties. We were privately informed he has difficulty with his seed pods hanging on—his young son thinks they resemble small footballs too much!! A few of the early bloomers included Snow Flurry, Alta California, Alice Harding, Eleanor Roosevelt and a very charming very early canary yellow of fair size, good branching, form and substance—Daffodil Lassie.

Thence Northeast to Alan Wild's of the firm Gilbert H. Wild and Son, Sarcoxie, Missouri. Exclusively wholesale growers of fine peonies, iris and hemerocallis, they have what every true iris enthusiast dreams of—acreage. There are check-rowed peonies, iris rows by the mile, hems by the acre and daffodils by the tens of acres. Dwarf iris were just past their peak of bloom and only a few intermediates plus Snow Flurry were out. Among the dwarfs making a fine show in long rows were Citrea, a good border dwarf in



golden yellow; Schneekuppe, a topnotch white; Die Fee (sometimes called Fairy), a light blue-white flecked blue. Visitors can't go wrong with a visit here during the peak blooming season of the various flowers. Little or no iris hybridizing is being done; however, peony enthusiasts should keep their eye on Mr. Wild's son who has rows and rows of peony seedlings in their first year of growth.

Having completed a tour of some of the larger gardens in the southern part of District 18 of the AIS, time running out, and many iris coming into bloom in my own garden, it was back to Fair Chance Farm, the iris and the local visitors. Reports on iris performance in our own garden and future iris ramblings will keep for a later date.

## OHIO AND NEW ENGLAND

*Don Waters*

Amandine: Not a cream or a light lemon but a lovely shade just between the two with fine full falls and standards.

Ann Newhard: A lovely blue and purple bi-color. Not as large as some, but it has appeal nevertheless.

And Thou: A very good light blue iris whose blue and white beard adds to its beauty.

Anna Williamson: I have admired this iris for several years as a numbered seedling in Paul Cook's garden.

Blue Rhythm: One of the nicest blues I have seen this year. Its silvery blue is accented by the velvety texture on the broad flaring falls.

Bryce Canyon: Fine color and shape and very distinctive. Up to Kleinsorge high quality.

Black Banner: A very dark silky black with a dark brown beard emphasizing its darkness.

Blue Glow: A lively color with brown in the haft.

Barbara Luddy: Very pink, very fine in shape and size making it an all around good iris.

Bright Lights: Lemon standards and white falls made up into a delightful flower.

Cordovan: The name is descriptive of its color—which is attractive—but the flower appears to me as being a bit coarse.

Copper Beech: A lovely copper blend with a dark copper band around the edges of both falls and standards.

- Chivalry: Not my choice for the Dykes, but nevertheless, a grand iris in every respect.
- Chamois: Fine size and shape but its color disappointing.
- Cortica: An interesting yellow plicata.
- Easter Bonnet: The interesting array of color makes this an impressive iris.
- Distance: A very, very blue flaring iris. Compared to all the blues of this shade which I have seen, I rate it the bluest.
- Dreamcastle: Broad—bold—and brilliant clover color; thus a really fine iris.
- Golden Ruffles: An iris of nice color but not as ruffled as the name indicates.
- Golden Epaulets: Improved Fair Elaine.
- Helen McGregor: A lovely blue with fine shape, though not as blue as I had hoped or expected.
- Kentucky Beauty: A very pleasing rose colored iris.
- Katie Belle: Lovely orange-copper blend impressing me as being very good.
- Lady Mohr: Try planting Lady Mohr next to a lemon-yellow to bring out its real beauty.
- Lake Shannon: A large blossom whose very blue color proves it outstanding.
- Lord Dongan: A fine flaring flower with light beard adding interest and attractiveness.
- Mary Ellen: Fine rich color reminding me of a brighter Louvois, better form.
- Miogem: A very colorful blend with excellent carrying power.
- Master Charles: The rich brown haft on this brilliant mulberry iris together with splendid growing qualities make it very desirable.
- Orchid Lady: Nice size, shape, and color as the name describes.
- Red Torch: Very brilliant and an outstanding color likened to Radiant but in more brilliant tones.
- Royal Diadem: Nice bi-color with large rich colored falls.
- Sylvia Murray: Precise styling, frosty texture, good substance; a truly fine iris.
- Three Cheers: A stand out in any garden. Its brilliant colors set off by a broad white beard. Although not too well branched, it is very desirable.
- Vision Fugitive: A fine large cream iris.



White Wedgewood: I found this disappointing in Cincinnati but fine at Lowell, Mass.

### SEEDLINGS

McKee 4717: A real thrill. A yellow bitone of white standards, yellow falls that pale at the edges together with fine form, size, and branching.

McKee 4711: Attractive and colorful with its orange standards and henna falls.

McKee 4703: This is an interesting light blue in a reverse bi-color.

McKee 4600: A fine very brilliant dark yellow with excellent shape and fine branching.

### SEEN IN NESMITH GARDEN

B. F. Hall B-79: A splendid red of excellent form.

B. F. Hall R-104: Copper flushed with red; excellent form and substance.

B. F. Hall Y-53; Yellows with flaring form are scarce but here is one with lots of appeal. The color is clear light yellow.

Cassebeer 31: Rich mahogany standards and falls, very smooth, with no haft markings whatever, make up this fine flower.

Tan Boy (Marx): A rich tan spread evenly over a large but interesting and graceful flower.

Lucky Star (Marx): Another reverse yellow bi-color but different by reason of superior styling and balance.

Nesmith 4526-A: A Bryce Canyon seedling which is an improvement over its famous parent.

\* \* \* \*

Le Grohn 147: A newcomer in seedling growers and he has come up with a gorgeous light blue. Large, beautifully shaped and accented with a light lemon haft and beard.

Cook 8042: Light straw colored standards, pink falls with a distinct band of straw yellow on the edge of falls. This iris is large, beautifully ruffled and of fine substance. If this seedling has the branching which Mr. Cook will demand, it will be a "must have" in every good collection.

## FROM ILLINOIS

*From George G. Zink, Ill.*

- Afar (Lapham). Large cinnamon pink on a 34-inch stalk. Attractive in a clump.
- Bright Melody (Snyder). Rich, concord-grape red. Very bright.
- Better News (Becherer). S. light cream. F. white, flushed pink with a pale golden tan border. Good substance.
- Cloth of Gold (Whiting). Clear, clean golden yellow. A fine iris.
- Cool Lemonade (Muhlenstein). Clear lemon yellow and white. Refreshing.
- Distance (P. Cook). Large flower, S. domed, ruffled. F. semi-flaring, wide and waved. Color, light blue self.
- Misty Gold (Schreiner). S. med. yellow. F. white bordered yellow. Large flower, good form.
- Melody Lane (Muhlenstein). A nice plicata with red markings on a yellow background.
- Oriental Bazaar (Buneaux). S. amber flushed red at the tips. F. lilac rose with wide amber margin. Attractive.
- Octobie (Schroeder). A large powder blue of excellent form. Good stalk and branching.
- Pierre Menard (Faught). A beautiful large medium blue bi-tone. Not yet introduced.
- Russet Wings (Wills). Large ruffled bright russet of fine form; very good this year.
- Sylvia Murray (Norton). Tall large light blue. Good form, stalk and branching.
- Pale Dawn (Fay). Pale orchid-blue. Good branching. 40 in. stalk. 12 buds.
- Purple Moor (Lapham). Large deep red purple. Very rich, good form, excellent branching, strong stalk.
- Radiation (D. Hall). Large deep orchid-pink with tangerine beard. Good garden value.
- Vice Regal (Miles). A dark iris of good form. S. Red-purple. F. darker. Beard orange, tipped purple.





Photo by Sam. Y. Caldwell

*Orville Fay points to clump of New Snow while Franklin Cook, Fred DeForest, Henry Sass, G. Douglas and Frances Douglas look on. Annual Meeting 1947.*

*From Geo. Buneaux, Ill.*

Cahokia (Faught). A 5x5 tailored flower of clear light blue on a tall well branched stalk. One of the very best in this color class.

Radiation (Hall). A smooth pink with six by six and one-half semi-flaring flowers with an intense tangerine beard. The stalk is twenty-seven inches with three way branching. On opening the flower shows a little lavender which fades to a pure pink.

Total Eclipse (Hall). A deep purple with five and one-half semi-flaring flowers on a thirty-one inch stalk. Very little reticulation. Very dark and smooth.



## THIS AND THAT FROM IDAHO

MARY F. THARP, *Idaho*

Can't hardly wait to tell you how much I enjoyed the Plicata "Field Day" in the July BULLETIN. (Wish there had been more photographs of types.) One of the loveliest of any type, whether stitched, feathered, etched, sanded, peppered, marbled or striped, seen this season, was Tell Muhlestein's Melody Lace; it truly is a melody that lingers with one long after blooming season is over and has a faintly cream ground with a delicate lacy rosy orchid etching; it also has good form, height and substance. For those (like myself) who like that sort of thing, it is just the sort of thing you like.

At last, after so many years, my clump of Elmohr decided to bloom and how disappointing to find that it left me as cold as a "widower's proposal" (when you say that 'podner,' SMILE!).

I am fully aware that, after a remark of that kind about the famous fabulous favorite, I receive the same look I get when I say that I have seen NO flying saucers, which is the same look I got a few years ago when I admitted I had not read Forever Amber and that The Egg and I bored me to tears. You probably know what I mean.

If Elmohr continues to bloom I may change my mind for I firmly believe in the policy of Arthur John Bliss, who said (BULLETIN 43, p. 18) "I try always to keep my mind open and don't mind changing it twice a year if necessary."

If one is looking for glamour, that thing so hard to describe as it means any number of things, all of which excite interest, one need not look further than Show Girl. Lacking somewhat in substance yet such a lovely blending of rose and gold, one just plants it in the shade and enjoys it. Four large ruffled blossoms out at once on one stalk will make you late for church any time.

Until it bloomed for me, no one told me that Franconia was such a fashion-perfect iris, an iris extraordinary! When I say it out-classes Purissima in the white class, you know it must be good for I have been loyal to Purissima a number of years. White Goddess is good, Sharkskin is better, but I thought Katherine Fay's falls were too long and too broad for the standards. Just a notion of mine, but I do not care for so-wide falls that seem to be so popular with many; yet who can admire the strapped and tucked in ones?



Someone has said "that it is not true love, unless one loves the faults as well as the virtues." I try to apply this theory, but I do not seem to get anywhere with it in regard to iris; while I may overlook their faults to the extent that I can still admire their virtues. If one longs for or wants perfection, what's the matter with that?

New shades are welcome. While lavender is not a new color by any means, as seen in Lavender Mist, it seems like a new and melting pastel. To me it looks just like frost on a silver mug; while the new shade of violet in the much ruffled Stella Viola adds an exclamation point to your garden! I like it. I even like the slightly open standards. (Could it be true love? I wonder.)

Tompkin's Coronado certainly deserves a place in the sun! Close to orange in tone as it bloomed for me, it has a lot on the beam and is a welcome relief from the many yellows that follow each other in rapid succession. Yet the member from this district who attended the Annual Meeting brings news, exciting news, of Orville Fay's Xantha!

Garden visitors wavered between Red Valor and Garden Glory this season, with the nod finally going to Garden Glory. Concerto was accepted as a "nice" iris, but no raves over it and that goes for Bright Melody also. Another year may prove a different story. Next season I am looking forward to seeing Vatican Purple bloom in my garden. One collects iris like beads on a string, one after another.

News note—for those who care; out of Limberlost crossed with a pure yellow seedling of Bonanza, a new and different plicata; different in that a narrow distinct edge of heather on pure whitefalls; stands out with great clarity for so narrow an edge. The standards are flushed heather. To save you looking it up, Limberlost is out of Theodolinda  $\times$  Mme. Louis Aureau, and could be described as a darker Florentine. It is not only sanded with violet, but has a distinct stitching around the falls and for added novelty has a deeper flush or thumb print at the tip of beard.

Garden visitors can hardly believe it is not a Mohr hybrid. (It could do with a little more substance in the standards), however the new one out of it has plenty of size and substance—and height.

It seems that I am ending just where I started, with plicatas; They are on my mind! Have read all the articles a number of time or until I am in "stitches." It must be a disease!

## NEW ENGLAND

HAROLD W. KNOWLTON, *Mass.*

The New England Region is compact and we are able to see each other frequently and to visit many gardens easily. There are about 200 members in this region and it is an enthusiastic group. Monthly meetings are held at Horticultural Hall, Boston, throughout the winter, at which we have discussions, slides, talks by iris breeders, and these are well attended. Each iris season we have a schedule of iris garden visits which this year took four days.

The iris season got off to a slow start. A cold spring delayed the blooming season almost two weeks. We had set June 6 and 7 for our biennial iris show at Boston and for a time it looked as though there would be no iris to exhibit. But as it turned out it was a nice show. The specimen stalks were good, and the garden club arrangements were really beautiful. Mrs. Lowry carried off all the honors,—A. I. S. silver medal, Mass. Horticultural Society silver medal, and her iris *Syringa* was voted the best stalk in the show by a group of judges of the A. I. S. and the Mass. Horticultural Society.

Mrs. Knowlton and I visited twenty-one iris gardens this year, big and little, starting at Montclair, N. J., and Staten Island on May 31st, and ending at Portland, Maine, the last of June. It has been very interesting but at times somewhat exhausting.

Our first visit was to the Presby-Memorial Garden at Montclair, named in memory of the first treasurer of our society. It is a beautifully kept public park with extensive plantings, with long beds following the curve of the hillside. It had large blocks of many iris, some of them older varieties, but with many newer introductions. A block of Minnie Colquitt, the purple edged *plicata*, was very outstanding.

On May 31st we went to Staten Island where the scenic garden of Kenneth Smith is located on top of a hill overlooking lower New York harbor. It is a gorgeous garden and there we met Dr. and Mrs. Graves and our new judge, Prof. Howard F. Dunham, whose enthusiasm knows no bounds. He had come all the way from his home at Hanover, N. H., to see the garden. Here Kenneth Smith grows many of the finest iris. His own introductions are in large blocks. One garden under a small birch tree was solid



with Fall Days, his new brilliant autumn blend. Another garden, a round one, showed Blue Valley, Sea Gull and Marion Vaughan. Sea Gull is a new white iris, flaring form, good branching, which is registered by Mrs. Smith. Admiration is a very fine smooth yellow. Edith Rorke, a blue and white plicata, pleased us very much. One iris which he had in large blocks was Marie Antoinette, a sister seedling of Louise Blake. It was very effective but he has never introduced it. He has a "pink" iris with a bright red beard, 7-4, of which he is very proud. He also has a new blue seedling of Lake George, 6-5, which is very nice. 5-32 is a bright clear yellow with markings similar to Tiffanja.

The next day we stopped at the garden of Fred Cassebeer at Blauvelt. If it had not been for the kindness of the postmistress of Blauvelt who conducted us to his house, I am sure we never would have found it. He has a charming old Dutch house and in the garden were three of the finest Kolkwitzias I ever saw, in front of some dark evergreens. In his exhibition garden were fine specimens of Alpine Glow, Sundial, and Vigil, Mr. Wills' new white. The stalk of Alpine Glow was especially fine with perfect branching. He also had a nice garden of seedlings.

On our way home we stopped at White Plains and were sorry to miss Mr. Robert E. Allen, but saw his newly-set garden, which showed great promise. Next we visited the gardens of Mrs. Fred E. Shaw, Mr. Franklin Low and Mrs. Charles A. Johnson, all located in Medford. At the latter garden we saw her interesting olive yellow seedling (J37-1) and a nice seedling (S4-1) of Sweet Alibi  $\times$  Dir. Pinelle.

Sunday June 8th was the day set for visits to the gardens in Newton and vicinity. It rained, and rained, and rained. However, such of our faithful members as were not in Chicago at the annual meeting, gathered together and viewed the iris under umbrellas and raincoats. Later many revisited the gardens so as to see what the iris really looked like. In spite of the late season and some loss of bloom stalks from late freezes, the season was a good one.

The absence of borers in some of the gardens which had been sprayed with the new D.D.T. solution was very noticeable. The efforts of Dr. Fraim and Mrs. Lowry in this connection merit the approbation of the Society. It looks as if the borer was licked. In their gardens there were no borers to be found. Alas, I did

not spray for borer and as a result spent many an hour chasing them with a knife. Read the report of Dr. Fraim and Mrs. Lowry on borers in the last BULLETIN. It is worth while.

In the Lowry garden I noted Easter Gold, a clear yellow of fine form on tall branched stalks. Large clumps of Mt. Hermon were very fine. Lady Boscawen was in bloom with a stalk 48 inches high. Syringa, her lavender iris, is a very strong grower with tall stalks. Her blue seedling L5-9, with a white beard, was admired by all the judges who saw it, and has been awarded an H.C. L3-30 is a clean white-ground plicata with purple edging and makes a wonderful show. She had several other fine seedlings which showed remarkable growth on first year bloom. At a visit to her garden on June 24 there was in bloom a seedling of Red Douglas by Red Bonnet which I admired very much. It is L4-9 and is a rich red with a dark bronze beard. Among the table iris Joy and Nambe were very bright. Nambe is a dainty little iris with wiry stems and purple falls. A clump of Lord Dongan was of the finest. It is unique in color, a (lavender) bicolor with smooth finish and absolutely no venations.

Mr. M. J. Barker had reset much of his garden. The heavy rich, new soil gives him remarkable growth. One garden was devoted entirely to the reds and allowed comparison. Lights On was outstanding. At the end of his garden was a large clump of Miobelle. It is a rampant grower with wide-spreading branches and it is proving one of our best breeders. Mary Newport, Mr. Barker's huge blend, was in bloom and met with universal approval. At the end of the season he had a bloom on a cross of Capt. Wells  $\times$  Storm King (47-16) which was fine—falls widely flaring, very dark purple with an iridescent sheen,—tightly closed standards, and dark beard. Here also was growing Mr. Gage's 12-SM, the smooth yellow which has been named Greig Lapham, and which will be introduced next year. Another garden was devoted to "pinks." Lapham G-7 is very nice.

In my own garden I was particularly pleased with a blue seedling (45-4) which I have tentatively named Kezar Lake, and an Amigo  $\times$  Wabash cross registered as Chiquita. The latter is quite ruffled with good sized bloom. I also have a deep red self with smooth texture, velvety flaring falls with almost no reticulations at the haft which I like and have named Quechee  $\therefore$  (Prince of Orange  $\times$  Reydon-45-11). Puff Ball (42-57A) is a very ruffled white with



falls almost horizontal, very late, buds pale blue (Snow Flurry × Easter Morn). In spite of its parentage it seems to be hardy. Wills' Russet Wings is a very fine tan blend of large full size. Dr. Kleinsorge's General Patton bloomed late on a new plant. It is most brilliant and intense in color, a copper red brown self, which positively glows in the sun. Yellow markings on the haft enhance the brilliancy. Nicholls' Black Banner is a rich blue black, very dark. Suzette, on two year plants, threw five nice bloom stalks, well branched as usual. Other noteworthy stalks were Cascade Splendor, Sharkskin, Gypsy, Chivalry, Helen McGregor, Tiffanja (a very fast increaser), Cloudeastle, Golden Fleece and Ola Kala. After viewing my garden in the rain, at noon thirty-two cold and wet iris fans gathered in our living room where we entertained them at luncheon. Afterwards Mr. McKee gave us an informal talk on the iris he had seen this spring. He particularly praised Amandine, Rocket, Cloth of Gold, Jasmine, Auburn, Cherie, Pink Cameo, Chivalry, Master Charles and Helen McGregor.

We then went to Waltham to visit the lovely, beautifully kept, garden of Dr. and Mrs. Irving W. Fraim. There the rain let up temporarily and we could see the iris and other plants and shrubs with more comfort. His iris garden is only a few years old, but has made remarkable growth and he has a nice collection. Culture is perfect—no bugs or disease to be found. They are great enthusiasts and grow orchids as well as iris. Later in the afternoon the Merrys entertained us at their Needham house with a delightful tea. There we had a round robin discussion of the iris that had most impressed us that day. They have the true artistic instinct and are developing their hillside house in a fine way.

On Tuesday following we visited the gardens north of Boston. Mrs. Preston E. Coreys' garden at Reading was first on the list. We had a grand time wandering through her lovely garden with the rock wall surrounding it. She has done a marvelous job in the two years she has lived there, and every year her seedling beds expand. The first iris we noted was a large lavender plicata, much ruffled, rounded form, (85H) with a faint tint of lemon in the ground. It has been given an HC. DeForests' Edenlure, a brown orange blend of great substance, made a fine show. Her seedling 211-1 (Snow Flurry × White seedling) was a beautiful flaring lavender with white beard and perfect alternate branching. She also had a "bluer" blue, B-X1 (Great Lakes × Blue Zenith).

At noon we gathered under the apple trees at the Nesmith's garden at Lowell, where we had our box lunch and our hosts served us delicious ice cream and coffee. This gathering has long been a pleasant custom, and we all look forward to friendly exchange of ideas and gossip and to seeing her extensive collection of the latest and best in iris. We are fortunate in having her garden so conveniently located.

To me the outstanding iris of this garden was a magnificent clump of *Amandine*. The yellow cream flowers are gracefully poised on the stalks and the color has a clarity and brilliance that gives it great character. The "pinks" were again in evidence. There was a good clump of *Barbara Luddy*, Lapham's new tangerine beard pink; also *Pink Cameo*, which to my mind is one of the best of this color, with a short red beard, no veining, and a flush of tan yellow on the haft. Her *Exquisite*, clear shell pink, was also in bloom. *Sea Lark* of Muhlstein was a lavender blue of perky form and closed standards. The Siberian iris *Tropic Night* was a clear rich blue of good size and is among the best of that type. *Black Forest* is the blackest iris that I have seen—on a short stalk, broadly flaring, blue black, with a satiny sheen and a beard same color as the flower,—a complete self. Other notable iris were *Jasmine*, *Lady Mohr*, *Bright Lights*, *Juliet*, *Golden Russet*, *Desert Moon*, *Barbara Adams*, *Lothario*, and *Duet*. *Chivalry* was growing nicely, as was *Helen McGregor*. Her seedling 45-25A (*Sukey of Salem* × *Miobelle*) was a lively glowing copper red. On a latter visit we saw *Nicholls' Blue Glow*, a rich late purple with a long beard, and several nice seedlings of H. F. Hall,—Y-53 a rich yellow, R-104 red brown and copper blend, B-79 a red self which was especially good with velvety falls and a lighter edge, and R-97 a smooth rose violet. At that time we also saw a bloom of Mrs. Nesmith's 44-27A, tentatively named *Copper Beech*. It is really something,—a copper self with a sheen which gives it a lovely finish. The beard is short and old gold; falls are rounded, standards domed.

In the afternoon we visited Stedman Buttrick's magnificent garden on the banks of the river at Concord. There he grows things in large clumps with ample space between them. *Vision Fugitive*, *Jasmine*, *Serenata*, *Gold Beater* and *Sharkskin* were very fine. One very happy group was made up of *Moonlight Madonna*, long-spurred pink columbine, and *Great Lakes*. *Kleinsorge's Cordovan* was a very rich brown red. He had several blue and white seedlings



of great promise. As the afternoon was warm the cool punch served on the veranda was most acceptable.

On June 12th we went to Natick and stopped at the garden of Mr. Gage. Our old "young" friend was unfortunately in the hospital, but we all signed a greeting note to send to him. There we saw a tan and blue seedling 37-56 which was noteworthy. We do not have too many in that color class.

After luncheon at the 1812 House at Framingham we went on to Worcester where Mr. and Mrs. McKee greeted us. There we were overwhelmed by the wealth of good seedlings which he is producing. 4720 is an orange yellow with a white blaze in the falls. 4600 is a brilliant orange self with a soft brown overlay, and an orange beard. 4711 is a large orange bronze self of good form. Miogem in a clump had eleven bloom stalks and bloomed over a period of three weeks. It was easily the high light of the garden and is a splendid iris in every way. Mary Ellen, a late bloomer, has large well formed oxblood red flowers of great depth of color with a lighter marginal edging. It is very floriferous on three-way branching. Augusta, a seedling which received an HC award in 1946, was even more beautiful this year. It is an unusual blend of brown, blue, and bronze that gives an iridescent effect.

Blue Rhythm, Master Charles, Cascade Splendor, Distance, Cloth of Gold, Suzette, Pink Cameo and Blue Glow were outstanding. At the close of the season Mr. McKee reports an iris, Seedling 4717, which was a great surprise in color—an "amoena" with white standards tinted cream and falls of mimosa gold, edged with the same color as the standards. It has extra large blooms of beautiful form and leathery substance on a 40 inch stalk. A real color break.

Our next stop was the hillside garden of Mr. John F. O'Driscoll. Then we went to Mr. Carruth's garden, where Mrs. Carruth and their daughters served tea in a delightful setting under the apple trees. The pert little wrens were continually flying in and out of the bird boxes and we spent there a very pleasant hour looking at his seedlings and enjoying their hospitality. A dark purple from Black Wings had full satiny falls of great depth of color. Another fine seedling was a flaring Neglecta (Mme. Lasailly × Wabash) with light blue standards. 4617 was a nice reverse yellow bicolor and 4602 was a fine white with a white beard. [(Great Lakes × Easter Morn) × (Snow Belle × Matterhorn)]

On June 14th we called at the new garden of Prof. J. R. Harrison.

our former Regional Vice President, located in Bedford. There his iris were set out in long rows in the field and had made rampant growth. The outstanding clump was a remarkable 3-stalk one-year plant of Black Forest. It was gorgeous. Redyen was doing finely, —also Tobacco Road and many others.

The next visit was an all day trip to Concord and Hopkinton, N. H. to see the extensive plantings of our vice president, Dr. Graves. Both at his intown garden and his hill top home in Hopkinton the iris were growing in bewildering profusion. At Concord we spent the morning under the guidance of Ed Watkins, who knows the parentage of every seedling by heart. At noon Mrs. Graves, assisted by their son, daughter and grandchildren, served us a lovely luncheon on the terrace.

Jane Phillips, Dr. Graves' new blue seedling of Helen McGregor, was admired by all. It is slightly bluer than Helen, but as Ed Watkins said, Helen McGregor is still tops. There we saw for the second year a fine white seedling named Helen MacKenzie. It is a warm white, of heavy substance, the beard almost white and with well balanced stalk and flowers. Sarah Lee Shields was a large ruffled white. The Spartan was a fine orange yellow, (44-12) the color almost identical with its pollen parent, Ola Kala. There we also saw Blue Valley, Mattie Gates, Bandmaster, Admiration, Francelia and many other fine iris. Lady Louise is a stately iris with large ruffled standards of colonial buff and white falls which he has introduced this year. It is entirely worthy of that lovely lady, Mrs. Louise Blake, for whom it is named. Mr. G. L. Pilkington, president of The Iris Society of England, was present and made a few brief remarks on the development of iris as he had seen it in this country.

The last garden to be visited was, as usual, that of Dr. and Mrs. Walter E. Tobie at Cape Elizabeth, near Portland, Maine. There we saw most of the recent, and the best of the older varieties, growing nicely in her well kept gardens, surrounded by lovely trees and shrubs. Her collection of perennials, shrubs, evergreen and deciduous trees is a study in itself. After a delightful morning in the garden we were invited into the picturesque summer house for a refreshing fruit punch and then to her house for a delicious lobster salad. Two large clumps of The Admiral were features of the garden. The height of their stalks was very remarkable. Salomonie was a fine pink and yellow blend with rounded form. Her Amigo  $\times$  Wabash



seedling (1-46) since registered as Aucocisco, was awarded an H.C. this year. It is a fine flower, well branched, with good height and clean colors. The standards are light blue, falls rich velvety purple without border. I was very much impressed with it. Another nice seedling was a white from Wasatch  $\times$  Nobility. It had Nobility's height and garden value with better form. A pink plicata blend from Phantom  $\times$  Mme. Louise Aureau with yellow style arms, was much admired. Her Silver and Gold was growing in a fine clump, as was Master Charles.

This closed a busy and, on the whole, a good season. Weather was favorable except for the Newton visits. From thirty to forty members attended these trips and I think that all had a good time.

#### VARIETAL NOTES

*Admiration*—a rich yellow with round falls and smooth color. Somewhat larger flowers than Goldbeater or Jasmine, but the three make a fine trio.

*Alpine Glow*—Throws an exhibition stalk with candelbra branching: appropriately named, for the lavender, pink and yellow blend is reminiscent of the sunset glow.

*Amandine*—Our best clear lemon cream self: the well poised flowers give a good garden effect. Try this or Snoqualmie with Lavender Mist, or with Elizabeth Ann and a light blue self.

*Amity*—a white iris heavily washed and streaked with blue: blooming in my garden for two years it is very sturdy and makes a clean, nice appearance.

*Aucocisco (Tobie)*—A grand Amigo  $\times$  Wabash Seedling—seen for two years—standards light blue, falls rich velvety purple without veining or light edge: has height and good branching and well poised flowers.

*Barbara Luddy*—One of the new "pinks" with tangerine beard: I like G-7 (to be named Bonnie, I understand) better. The latter has a clearer color.

*Blue Glow (Nicholls)*—a rich purple, very late and very fine. Bigger and better than West Point.

*Blue Rhythm*—Grows well and makes a nice garden clump: white beard with touch of orange in the haft: I like this very much.

- Butterfly*—The queerest brown and white striped iris that I have ever seen. This and Daffy make a pair of oddities different from any others.
- Cloud Castle*—A massive lavender blue flower that makes a nice clump in the garden.
- Ebony Queen*—Sass' new deep purple—it seems richer, deeper and larger than Sable.
- General Patton*—A new introduction by Dr. Kleinsorge that certainly has color and also branching,—a brilliant red copper that glistens in the sun—gleams of gold on the haft blend into the copper.
- Lady Louise*—One of Dr. Graves' best introductions—a stately iris: standards are light buff, falls white bordered with same color as standards.
- Lady Mohr*—Contrary to my impression of last year, the tall stalks with light lavender standards do give garden effect: the standards "carry" well and the olive green falls are very interesting. It is a rapid increaser.
- Lake Shannon*—One of our best medium blues—the heavy blue venations are an added attraction.
- Lord Dongan*—Definitely smooth and polished. Lavender bicolor without venations: seven blooms on three stalks in Mrs. Lowry's garden made a grand show. Unique in color.
- Mary Williamson*—A dainty "butterfly" amoena that has been on the market for some time, but deserves a good place in the garden. The small, frilly flowers are poised like butterflies. This iris, Azure Skies and Amigo always make a nice show.
- Master Charles*—Now becoming well known in England. It has everything in its color—deep purple with brown blending on the shoulder: heavy firm flowers, prolific and good branching.
- Miogem*—This red, blue and copper seedling of Miobelle has richer, deeper, and more brilliant coloring than any blend that I have ever seen. Another year has proved that it is a rapid grower. The blue blaze on the falls is extremely effective.
- Nambe*—A real table iris—strong, slender stalk with yellow standards and violet falls.



- Pink Cameo*—The best form of any of the new pinks that I have seen. Flush of yellow buff on the haft, standards are clear pink without veining—short bright red beard.
- Russet Wings*—Beautifully domed, large flowers, of blended copper and tan tones. The horizontal venations on the haft add distinction to this outstanding flower.
- Sea Lark (Muhlenstein)*—A neat, perky lavender blue, not large but nice.
- Some Love*—One of my favorites in the oncós. A squatty flower peppered with pink lavender dots—grows well in my garden. Should be better known. Everyone who sees it wants a piece of it.
- Spindrift*—One of the show clumps in my garden this year. The flowers are very fine, somewhat square in shape. At a distance of ten feet you see only the nice pink color, and the venations at the haft are not apparent.
- Staten Island*—A variegata with clean deep yellow standards and solid maroon falls with yellow edge. It seems to be a strong grower. Most of our variegatas are blended, lacking the clear contrast of *Iris King* or *Lodestar*.
- The Admiral*—This year I saw several well established clumps, and it seemed to me better than ever.
- Tiffanja*—Another year confirms my opinion that this is an outstanding plant in habit of growth—Tall, well branched, good grower, apparently resistant to disease and borer. I have seen four and five flowers on one stalk open at one time. It will stand up under a three days' rain when all the other iris around it have caved in. And will it set seed!
- Tropic Night*—The clearest deep blue Siberian that I have seen. Its intense blue reminds me of some of the Dutch bulbous iris.
- Vice Regal*—The largest flower in a rich red purple self that I have seen.
- Vigil*—A smooth, tailored white of heavy substance and a white beard.

MRS. P. E. COREY, *Mass.*

- Azure Skies (Pat. 1943), was a most beautiful clump of large ruffled blooms. Satisfactory performer.
- Cloth of Gold (Whit. 1945). Its clean, brilliant golden color and flaring ruffled form is emphasized by the orange beard.
- Edenlure (Deforest) Large, full copper colored blooms of fine form and lasting qualities. It does not lighten or fade and the falls are very velvety giving a rich effect. On a first year plant, good plant, good stalk, good growth and average increase.
- Garden Glory (Whit. 1943) To me the most satisfactory red for color and richness. Growth is slow but it is worth waiting for.
- Hiwassee ( ) A disappointment. The Frieda Mohr parentage was apparent in color and haft markings, but the allure of Frieda was lacking. Growth was satisfactory and perhaps a clump may have more appeal.
- Lavender Mist. (D. Hall) Semi-flaring, pink lavender blooms with some ruffling. Medium height, excellent growth. This is most attractive in a color range where there are but few.
- Melanie (Hill-son 1941). Always a dependable performer, this tall medium orchid-pink makes a splendid clump.
- Ming Yellow (Glutz.) A transplanted root of this fine yellow with four blooms out caught many eyes.
- Orangeman (Waters 1946). This new introduction from Longfield gave a most satisfactory performance. As "Orange" as any, it is clean looking and held its color without fading. Large flower of rather long form, stalks three branched.
- White City (Mur. 1939). Sturdy stalks and blue-white blooms that lasted well.
- Sable (Cook 1938). First of the dark ones to bloom, lovely and long-lasting.

## SEEDLING COMMENTS

*Geo. Buneaux, Ill.*

- No. 745 (Paul Cook Seedling) A coppery red with five by six flaring flowers on a twenty-nine inch stalk.
- No. 5547 (Paul Cook Seedling) A medium blue with four and half by five and half semi-flaring flowers with reticulation well in throat, thirty-two inch stems with three way branching. Smoother and bluer than Chivalry.



- No. 5647 (Paul Cook Seedling) A very dark reddish purple with medium size flowers on a thirty-two inch three way branch stalk. The fall has a black sheen, reticulation well down in throat and no veining. A very dark, smooth flower.
- No. 44-12 (Fay Seedling) Zantha. A fine chrome yellow. Tall with good branching. Medium large flowers.
- No. 47-21 (Hall Seedling) A blush pink with five by five ruffled flowers. The segments are wide, the beard tangerine, the stalks twenty-nine inches. A fine pink.
- No. 46-16 (Hall Seedling) A pink—pure in color, smooth, closed standards.
- No. 46-14 (Hall Seedling) A ruffled pink with open standards. There is a little veining. The plant is good.

*Mrs. P. E. Corey, Mass.*

- T Q 72, Loomis, Deepest in color of the four or five I've seen. On examination it appears to be slightly orchid in tone, but in a clump gives a fine pink effect. Stalks tall and well branched, flowers larger and better formed than Flora Zenor and others. Good growth.
- R6B3N1, Tobie, This has been named AUCOCISCO. This is an amoena with pale blue standards and falls of solid velvet, no border. Has three way branching and well spaced blossoms.
- 11-45, Washington. A tall, extremely well branched pale pink-bud. Fine growth and nine buds to the stalk.
- 216 Buttrick. Different and lovely, this plicata with standards of white flushed blue and with delicate plicata markings at the haft appealed to me.
509. Lowry. A lovely medium blue of classical form.

*George G. Zink, Ill.*

745. P. Cook. A very rich red of attractive form. Outstanding.
- 47-21. D. Hall. A bluish-pink, frilled and waved. A large flower of excellent form with very wide styles.
- E5. Lapham. A bright brown red from Lights On × Flamely. Good form and a well branched stalk.
- H-17. Lapham. Good form, good substance, a dark red with a black sheen.
- 46-36. Fay. Large ruffled white on a 38" stalk.

# CHROMOSOME NUMBER AND CLASSIFICATION OF BEARDED IRIS

L. F. RANDOLPH<sup>1</sup>

The species of Pogoniris, or bearded iris as they are commonly called, were subdivided by Dykes into four groups, Dwarf Bearded, Tall Bearded, Oncocyclus and Regelia. Classification of the numerous garden varieties that have evolved from these species is complicated by the fact that most of the species within each of these groups hybridize freely and little difficulty is experienced in obtaining hybrids between species belonging to the different groups. Low fertility is characteristic of such hybrids and persistent effort ordinarily is required to obtain progeny from them. However, in subsequent generations fertility is gradually recovered and types with interesting new combinations of characters appear which make classification difficult but which may result in significant advances in the development of improved types. Modern varieties of garden iris have complicated heredities often tracing back to two or more of the groups of Pogoniris established by Dykes.

The hybrids of Dwarf and Tall Bearded iris produced by Caparne nearly 50 years ago originated a new group of garden varieties which came to be known as Intermediate Bearded iris. The cytological studies of Simonet<sup>2</sup> showed that these hybrids had 44 chromosomes, a number intermediate between the 40 chromosomes of the Chamaeiris dwarfs and the 48 chromosomes of the tall bearded tetraploids. He further showed that a considerable number of supposedly good Central European species, including *germanica* L., *aphylla* L., *albicans* Lange, *florentina* Ker Gawl and *kochii* A. Kern., were hybrids having the same chromosome number and presumably the same origin as the varieties which Caparne and others produced experimentally.

The true intermediates are still recognized as a distinct group by English and French hybridizers, but in 1935 the American Iris Society broadened the definition of the group to include tall bearded iris of the same height as the true intermediates.

<sup>1</sup>Cooperative investigation of the Department of Botany, New York State College of Agriculture, Cornell University, and the Division of Cereal Crops and Diseases, Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, U. S. Department of Agriculture.

<sup>2</sup>Simonet, Marc Bull. Biol. France et Belg. 105, 1932; Ann. des Sci. Nat. de Bot. 10th Ser., 1934.



This classification of the intermediates emphasized height rather than blooming period and parentage, the two most important distinguishing characteristics of the Caparnian intermediates. It placed in the same category tall bearded varieties of reduced stature and first generation hybrids of tall and dwarf bearded sorts. Although it served a useful purpose in calling attention to differences in height among tall bearded varieties it effectively destroyed the individual status of the Intermediate Bearded section.

Unfortunately, the lack of recognition of the intermediates as a separate group by the American Iris Society discouraged the activities of hybridizers interested in originating new varieties that would provide continuity of bloom from the onset of the blooming period of the earliest dwarfs to the end of the flowering period of the late tall bearded sorts. More and better varieties that will bloom during this intermediate period are very much needed.

Tall bearded iris of reduced stature, which at present are classed as intermediates, ordinarily have been produced merely as byproducts of breeding for other characteristics. The production of hybrid intermediates of exceptional quality is a difficult and challenging problem worthy of the best efforts of our most experienced hy-



*A colorful corner in the Cook garden, Evanston.*

bridizers, and constitutes an achievement deserving of special recognition.

In recent years the usefulness of chromosome number in distinguishing between dwarfs of the Chamaeiris type, the true intermediates and tall bearded varieties of reduced stature has come to be generally recognized. Garden varieties classified in the 1939 Check List as Dwarf Bearded (DB) and Intermediate Bearded (IB), whose chromosome numbers have been determined either by Simonet (S),<sup>2</sup> Longley (L),<sup>3</sup> or in my laboratory are grouped below in these three categories.

<sup>3</sup>Longley, A. E., A.I.S. Bull 29, 1928.

### *Dwarfs*

Atroviolacea .....	36	Marocain .....	40
Aurea Maculata .....	40	Negus .....	40
Azurea .....	S 36	Nugget .....	40
Biflora .....	36	Orange Queen .....	40
Coerulea .....	S 40	Rupert .....	40
Cyanea .....	36	Socrates .....	40
Endymion .....	40	Sound Money .....	40
Graminea .....	40	Surefire .....	40
Jean Siret .....	40	Tiny Tony .....	40
Lutea .....	40	Titania .....	40
Macrocarpa .....	36	Trinket .....	40

### *True Intermediates*

Atropurpurea .....	L43	Helge .....	43
Black Hawk .....	44	Ingeborg .....	S 44
Bride .....	43	Ivoryine .....	S 44
Crysozo .....	45	Marine Wave .....	44
Crimson King .....	44	Maygold .....	45
Dariel .....	44	Miss Muffett .....	45
Dauphin .....	S 44	Odin .....	44
Diamond .....	S 44	Snow Maiden .....	44
Dorothee .....	S 44	Soledad .....	44
Florentine White .....	44	Southland .....	44
Germanica Alba .....	44	Spring Glow .....	44
Golden Bow .....	44	Susa .....	43
Golden Cataract .....	44		



*Tall Bearded Varieties of Reduced Stature*

Aksarben .....	36	Knysna .....	24
Aldebaran .....	S 24	Loreley .....	S 24
Alliés .....	S 35	Ma Mie .....	24
Andromède .....	S 36	Mrs. Horace Darwin .....	L,S 24
Archeveque .....	S 24	No-we-ta .....	24
Black Prince .....	S 26	Old Gold .....	24
Canary Bird .....	L 24	Pink Ruffles .....	24
Caprice .....	L 24	Pixie .....	25
Cordelia .....	S 24	Purple King .....	L,S 24
Dejazet .....	S 50	Red Elf .....	24
Etoile du Matin .....	S 24	Rubyd .....	24
Gay Hussar .....	24	Ruby Glow .....	47
Her Majesty .....	L 24	Tony .....	24
Iris King .....	S 25	Velouté .....	S 24

The early blooming varieties have either 36 or 40 chromosomes. The true Intermediates typically have 44 chromosomes, but an occasional variety may have either 43 or 45 chromosomes. Among the Tall Bearded varieties of reduced stature and later blooming period that have been counted, 24-chromosome diploids predominate but there are also triploids with 36 and tetraploids with 48 or approximately 48 chromosomes. Although the chromosome determinations are lacking it is probable that in recent years many tetraploids have been classed as Intermediate Bearded by the American Iris Society.

In general, this grouping arranged according to differences in chromosome number, brings together varieties of similar height and blooming period, but there are interesting exceptions. The variety *Bride* is ordinarily classified as a dwarf. It is the result of crossing an intermediate with a dwarf (*Statellae* × *Candida*) and is more like the dwarfs than the intermediate, in height and blooming period. Although its chromosome number places it with the intermediates it should be classed with the dwarfs on the basis of its garden characteristics. *Ruby Glow* has 47 chromosomes and in this respect is very similar to the Tall Bearded tetraploids, but on the basis of its growth habit and time of flowering it should be classed as an intermediate. *Tony* and *Pixie* rarely exceed 18 inches in height and for this reason have been classed as dwarfs. In my garden these two varieties bloom along with the tall bearded sorts

and hybridize readily with them. These characteristics together with the fact that they have 24 chromosomes strongly suggests that they are genetic dwarf segregates of pure tall bearded parentage.

The table iris originated at the Longfield Iris Gardens by the Williamsons are intermediate in height but bloom with the tall bearded varieties from which they were derived. My chromosome counts of the varieties Daystar, Kinklet, Peewee, Siskin and Warbler have demonstrated that these Table Iris are diminutive diploids with 24 chromosomes.

The chromosome numbers of the species from which they originated are very helpful in clarifying relationships among the garden varieties of dwarf, intermediate and tall bearded iris and their hybrids with members of the *Oncocyclus* and *Regelia* groups. The French cytologist, Simonet, working at the Vilmorin establishment near Paris 15 years ago determined the chromosome number of many species of *Pogoniris*. A considerable number of these counts have since been verified in my laboratory and counts of additional species have been made.

The following tabulation of chromosome numbers includes most of the species and collected varieties of importance in relation to the origin of garden varieties of *Pogoniris*. The numbers in parentheses are the somatic numbers determined from root-tip counts. Unmarked species were counted by Simonet (see footnote 2); those marked with a cross (+) were counted originally by Simonet and later confirmed by my counts; those marked with an asterisk (\*) were counted in my laboratory.

#### *Dwarf Bearded*

*attica* (16); *mellita*<sup>+</sup> (24); *serbica* and *bosniaca* also probably have 24 chromosomes as they are known to have produced 36 chromosome hybrids in crosses with *Ricardi* and *Macrantha*, which have 48 chromosomes.

*pumila*<sup>+</sup>, true (32); *pumila* from Carpathia\* (32); *pumila nana*\* (30); *pumila* from Rumania\* (30).

*alba*\*, *chamaeiris*<sup>+</sup>; *olbiensis*, *subiflora* (40); *balkana* (40\*, 48)  
*reichenbachii*\*, excluding *serbica*, and *balkana* (40)

#### *Tall Bearded*

*Alberti*<sup>+</sup>, *imbricata*, *pallida*<sup>+</sup>, *cengialti*<sup>+</sup>, *variegata*<sup>+</sup> (24)

*trojana*<sup>+</sup>, *cypriana*<sup>+</sup>, *mesopotamica*<sup>+</sup>, *Macrantha*, *Amas*<sup>+</sup>, *Ricardi*<sup>+</sup> (48)



### *Intermediate Bearded*

*aphylla* (24, 43, 44, 48<sup>+</sup>)

*albicans*<sup>+</sup>, *florentina*<sup>+</sup>, *germanica*<sup>+</sup>, Istria\* *kashmiriana*, *kochii*, Statellae\* (44).

### *Oncocyclus*

*atropurpurea*, *Gatesii*, *iberica*, *Lortetii*, *paradoxa*, *susiana* (20)

### *Regelia*

*flavissima*<sup>+</sup>, *Arenaria*\*, *bloudowii*<sup>+</sup> (22) *Korolkowii* (22, 33, 44)

*Hoogiana*, *stolonifera*<sup>+</sup> (44)

Any attempt to revise the existing classification of the bearded iris should take into consideration the fact that the garden varieties of dwarfs include not only derivatives of 40-chromosome species such as *I. chamaeiris*, *olbiensis*, *Reichenbachii* and *alba* but also the derivatives of dwarf species with other chromosome numbers as well. A diminutive dwarf species from Greece, *I. attica* Boiss and Held, has only 16 chromosomes suggesting that the base number among the dwarfs may be 8 or even 4 as Simonet has suggested. Another dwarf species, *mellita* Janka, has 24 chromosomes. The true *I. pumila* has 32 chromosomes and in combination with 40-chromosome forms has produced varieties with 36 chromosomes including *Atroviolacea*, *Coerulea*, *Cyanea* and *Macrocarpa*. The fact that various collections of *pumila* from different regions in southeastern Europe have either 30 or 32 chromosomes indicates that there must have been ample opportunity for the natural hybridization of the 32- and 40-chromosome dwarfs. Simonet has reported different collections of *I. Reichenbachii* with 24, 32 and 48-49 chromosomes, but the material I have examined from different gardens in this country has 40 chromosomes.

A purple form of *I. balkana* in my garden has 40 chromosomes; a specimen from the Royal Botanical Garden at Sofia had 49 chromosomes according to Simonet, and the parentage of the garden variety Mrs. H. M. White (*balkana* × *Cengialti*) which has 24 chromosomes suggests that Barr had a 24-chromosome form of this species in his garden when this variety was originated.

These various records of different chromosome numbers among the typical dwarf species emphasize the prevalence of polyploidy in this group of iris species, many of which are not clearly defined. Their hybrids with the Tall Bearded diploids and tetraploids with

24 and 48 chromosomes may have various intermediate chromosome numbers. Obviously, it would be rather difficult to define such hybrid intermediates in terms of chromosome number.

The Caparnian intermediates with 44 chromosomes represented only one of various possible combinations of dwarf and tall bearded sorts. It is interesting in retrospect that tetraploid tall was used in his crosses at a time when diploid garden varieties were much more prevalent.

Other possible combinations of dwarfs and tall are just beginning to be explored. Reports that the tall bearded diploids cannot be crossed with the Chamaeiris dwarfs seem not to be well founded. Several years ago, in attempting crosses of this sort in my garden at least a dozen hybrid seedlings were obtained from the cross Trinket  $\times$  Pluie d'Or. These seedlings all had 32 chromosomes, 20 from Trinket and 12 from Pluie d'Or; all were yellow in color, bloomed profusely at the same time as other true intermediates and the height of their flower stalks and the size of the blooms were intermediate between the parent varieties.

More than anyone in this country, Mr. Paul Cook of Bluffton, Indiana has been interested in combining various types of dwarf and tall bearded iris. He has crossed *mellita* (24) and the true *pumila* (32) with Socrates, a derivative of the 40-chromosome *olbiensis*. Trautlieb, a diploid, tall was crossed with Socrates and the 32-chromosome hybrid was in turn crossed with Dubrovnik, a 50-chromosome tetraploid. Mr. Cook kindly afforded me an opportunity to study a number of these hybrids and their parents cytologically. The observed chromosome numbers were as follows:

Cook 2043 [Socrates (40) $\times$ <i>pumila</i> (32)] .....	36
Cook 2043 [Socrates (40) $\times$ <i>pumila</i> (32)] .....	36
Cook 4543 [Socrates (40) $\times$ <i>pumila</i> (32)] .....	36
Cook Soc-Traut [Socrates (40) $\times$ Trautlieb (24)] .....	32
Cook [Soc-Traut (32) $\times$ Dubovnik (50)] .....	43
Cook [Soc-Traut (32) $\times$ Dubovnik (50)] .....	44
Cook [Soc-Traut (32) $\times$ Dubovnik (50)] .....	41
Cook [Soc-Traut $\times$ -----] .....	27
Cook 4643 [Socrates (40) $\times$ <i>mellita</i> (24)] .....	32
Cook 4843 [Socrates (40) $\times$ <i>mellita</i> (24)] .....	32
Cook 6543 [Socrates (40) $\times$ <i>mellita</i> (24)] .....	32



The Soc-Traut seedling of which the pollen parent was unknown is interesting because the low chromosome number (27) suggests that the other parent may have been a diploid tall bearded variety. Another noteworthy combination of Mr. Cook's brought together the tetraploids San Francisco and Varese with the true *pumila*. Among the seedlings from these crosses were several dwarfs from 8 to 12 inches in height with flowers in a terminal head.

Various hybridizers have been interested in producing diminutive dwarf types from *I. flavissima* Pallas, *bloudowii* Bunge and *Arenaria*, a named variety very similar to if not identical with *flavissima*. These forms have 22 chromosomes and thus seem to be more closely related to the *Regelias* such as *Korolkowii* Reg. (22, 33, 44) *Hoogiana* Dykes (44) and *stolonifera* Reg. 44) than to the dwarfs with which they are often associated. The following are typical examples of *Pogoregelia* hybrids of mostly dwarf or intermediate character.

Cream Tart [ <i>Arenaria</i> (22) × D B] .....	31
Mistopink [ <i>Arenaria</i> (22) × Rosemist (40)] .....	31
Tiny Treasure [Ylo × <i>Arenaria</i> ] .....	31
Fior del Mondo .....	30
Keepsake, Tampa [ <i>Socrates</i> (40) × <i>flavissima</i> (22)] .....	31
Cook [ <i>Socrates</i> (40) × <i>bloudowii</i> (22)] 3 hybrids .....	31
Cook [Keepsake (31) × Snowking (48)] .....	55
Valery Germanis [ <i>flavissima</i> (22) × <i>hungarica</i> ] .....	36
Sass, J [ <i>stolonifera</i> (44) × <i>chamaeiris</i> (40)] .....	42
Sass, J [ <i>stolonifera</i> Isolda × <i>chamaeiris</i> (40)] .....	43

The Keepsake × Snowking hybrid suggests the possibility of bringing into the tall bearded group an entirely new series of traits.

The Oncobred strain of iris developed by Mr. C. G. White of Redlands, California includes numerous varieties of intermediate height and some as tall as the typically tall bearded varieties. The origin of these varieties is uncertain but it is known that in the beginning both *Oncocyclus* and *Regelia* species were involved and subsequent admixture with tall bearded varieties is known to have occurred in some cases at least. With the exception of the variety *Sheriffa* which has 47 chromosomes all of the Oncobred varieties which have been counted in my laboratory have 22 chromosomes.

Included in this group are the following varieties.

Bed Time .....	22	Nelson of Hilly .....	22
Brillig .....	22	Present .....	22
Cogette .....	22	Sheriffa .....	47
Mozo .....	22	Some Love .....	22
Mustapha .....	22	Susan of Hilly .....	22
Myomy .....	22	Young April .....	22
Near East .....	22		

Several Pogocyclus hybrids which combined Oncocyclus species with garden varieties of diploid and tetraploid tall bearded iris have been in existence for many years. The most famous of these are William Mohr and its first and second generation offspring, Elmohr, Capitola and Lady Mohr. The following list includes the parentages of these and other similar hybrids together with their chromosome numbers.

William Mohr [Parisiana (24) × Gatesii (20)] .....	22
Ib-pal [ <i>iberica</i> (20) × <i>pallida</i> (24)] .....	S 22
Elmohr, Mohrmead, Mohrson, Ormohr, Soquel .....	46
Grace Mohr .....	46, 47, 48
Ib-Mac [ <i>iberica</i> (20) × <i>Macrantha</i> (48)] .....	S 44
Capitola [William Mohr × Ib-Mac] .....	43
Capitola × Dauntless .....	44
Lady Mohr [4n Yel (King Midas × Alta Calif) × Capitola] .....	45
Ormaco [Ormohr (46) × Aztec Copper (51, 52)] .....	53
Peshawar [Ib-Mac × dwarf seedlg] .....	40
Coquetry [ <i>Gatesii</i> (20) × <i>Lortetii</i> (20)] × Midwest (24) .....	48
Mme Savouillan [ <i>iberica</i> (20) × <i>Macrantha</i> (48)] × [ <i>kashmiriana</i> × <i>Bartoni</i> ] .....	45,47

Interest in these Pogocyclus hybrids as source material for new characters to combine with existing varieties of bearded iris was never greater than it is at the present time. The first generation hybrids such as William Mohr are relatively infertile, producing not more than one or a few seeds per pod and these only from unreduced eggs, apparently. But the advanced generation hybrids are more fertile and recombinations of varieties such as Elmohr and Lady Mohr with the tall bearded tetraploids may be accomplished without much difficulty.



In much less spectacular manner but of perhaps greater significance in the improvement of the garden iris has been the admixture of 40-chromosome dwarfs and hybrid intermediates derived from them with the tall bearded varieties which originated from the European diploid and the Asiatic tetraploids species. Hybrid intermediates including the 44-chromosome "species" *aphylla*, *germanica* and *kashmiriana* were used in crosses, beginning with Sir Michael Foster's work more than 50 years ago, to produce varieties which served as foundation stocks for later breeding. A complete list of existing varieties whose parentages include dwarfs and true intermediates would be very long indeed. Among the earlier varieties used extensively in crosses which transmitted valuable traits from the dwarfs to tall bearded varieties of more recent origin should be mentioned the following.

Argentina .....	50	Narain .....	48, 49, 50
Berenice .....		Omaha .....	48, 49
Blue Boy .....		Oriana .....	47
Damerine .....	49	Perdita .....	
Dymia .....	46	Red Bonnet .....	
Evolution .....		Rosy Wings .....	50
Frieda Mohr .....	36	Sable .....	47
Indiana Night .....	48	Souvenir de Mme Gaudi-	
Jean Cayeux .....	48	chau .....	48
Kashmir White .....	50	Snowking .....	48
Miss Willmott .....	51	Tenebrae .....	49
Moonlight .....	47		

The chromosome numbers of some of these varieties are unknown, as difficulty was experienced in obtaining many of the older varieties true to name.

It has not been possible to trace the sequence of events with respect to chromosome relationships which took place years ago as first generation hybrids of dwarf and tall bearded sorts were crossed repeatedly to tall varieties in transferring important genes from the dwarfs to the modern tall bearded varieties, or in the opposite direction. However, a glimpse of what must have happened can be obtained from the study of more recent hybrids of this same type, of which the following are typical examples.

Chevron [Chrysozo (45) × Desert Gold (50)] .....	45
Laddie Boy [( <i>pumila</i> × .....) × I B] .....	46
Schreiner I-37-2 [F <sub>2</sub> of <i>aphylla</i> ] .....	48
Schreiner [F <sub>2</sub> (Blackwings × <i>pumila</i> )] .....	40
Eleanor Roosevelt [Amas × ( <i>pumila</i> × .....)] .....	42
Florentania [ <i>florentina</i> (44) × Titania (40)] .....	42

Reversion from the intermediate chromosome number (44) of the F<sub>1</sub> hybrids takes place in the direction of one parent or the other depending on which way the cross was made. Fertility improves as the parental chromosome numbers are recovered or approximated in the second or third generation and the resulting varieties become indistinguishable in appearance or breeding behavior from the varieties with which they were crossed, except for differences in individual characters.

It is to be expected that attempts to classify mixtures of varieties of such diverse parentages as are represented in the garden varieties of bearded iris at the present time cannot be altogether successful. The existing classification of dwarf, intermediate and tall bearded varieties, based primarily on height differences, satisfies the iris enthusiast interested solely in the garden characteristics of the varieties he grows. It does not satisfy the hybridizer who is interested in the breeding behavior of the varieties he used in his crosses to achieve a particular objective. Of paramount importance to all who are interested in the improvement of the garden iris is the fact that special recognition of the true intermediates, and possibly other kinds of hybrids that are especially difficult to make, is needed to stimulate interest among hybridizers and provide adequate recognition for their achievements. It is hoped that this assemblage of data concerning chromosome numbers may be helpful in formulating a more adequate system of classification of the garden varieties of bearded iris.

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*From left to right, Mrs. Norman Horton, Howard Watkins, Ed Bretschneider, Mrs. E. G. Lapham and G. Douglas register (from left to right) curiosity, mild interest, amusement, sympathy and doubt, as Greig Lapham—maestro of the reds—points with pride.*

Photo by Sam. Y. Caldwell









# REGIONAL PERFORMANCE RATINGS

BY THE SCIENTIFIC COMMITTEE

## PART I.

In presenting this first report of the results obtained from the Regional Performance Rating forms that were distributed in April by the A.I.S. Regional Vice Presidents at the instance of the Scientific Committee, it may be well to quote the object of the effort to obtain regional performance ratings.

As stated in the explanation that accompanied the forms, "The object of these ratings, undertaken for the first time this year, is to determine the response of the iris varieties to growing conditions in the 18 existing regions. Performance ratings, not popularity ratings, are desired of fully established 2 or 3 year clumps grown under conditions typical of the region. These ratings will be used by the Scientific Committee to study the problem of redefining existing regions, irrespective of state boundaries to delimit natural horticultural areas for iris culture.

Regional performance ratings may or may not be the answer to the demand of members for some better evaluation of iris quality for their particular locality. Both the Official Symposium and the now suspended Iris Rating Program provide definite measures of composite popularity and quality. However, as regards the merit of a particular variety these measures are truly accurate only in the regions that contributed the most votes and ratings. In other words, the Symposium and the Rating Program reflect the preponderance of votes that may come from any region and for that reason a high rating or a high standing of a fine New England variety may be of very little value to midwesterners or farwesterners, and vice versa.

Other conditions have aggravated the situation to the extent where Official Ratings were so rapidly approaching the plane of sameness, where most varieties received a rating within the limits of error of the average and with no indication as to the regional value of a variety. While it may be true that on a national basis all varieties worthy of introduction will tend to approach closely the same score, this is of no benefit to the widely scattered members of the A.I.S. who still have to try and try new varieties to determine their value in their particular localities. The same thing, of course, has been said of symposium ratings.



The proposal to undertake both Performance Ratings and Symposium Ratings on a regional basis was made over a year ago and since that time has been discussed with officers and members of the society in most of the regions. Although some objection was registered, the great majority of those consulted were so in favor of the proposal as to justify at least a trial survey.

The questionnaires distributed in April were rather late in returning due to the late season and the manifold other tasks of the judges. The effect of "questionnaire allergy" was also evident. However, fifty-four rating forms were finally received by August first. Nearly half of these came from Regions 1, 6 and 15, while Regions 10, 13 and 14 were conspicuous by their absence, and regions 5, 9 and 12 returned only one each.

Practical considerations have therefore dictated the merging of some regions for tabulating purposes so that each super-region would have at least the required minimum of three returns. As far as possible this combination has been along climatic lines so that weather differences within the super regions might not be too great. The super-regions used in tabulating are as follows:

<i>Super Region</i>	<i>No. of Returns</i>	<i>Includes AIS Regions</i>	<i>Includes These Stations</i>
I	10	1 and 2	New England and New York
II	5	3 and 4	N.J., Pa., Del., Md., Va., W.Va. & D.C.
III	5	5 and 7	N.C., S.C., Tenn., Miss., Ala., Ga. & Fla.
IV	8	6 and 9	Ohio, Ind., Ill., Ky. & So. Mich.
V	3	8	N.D., S.D., Minn., Wis. & No. Mich.
VI	3	18	Iowa, Nebraska, Kansas, Missouri
VII	5	10, 17 and N.M.	Ark., La., Texas, Okla. & N.M.
VIII	4	11, 12 minus N.M. and Ariz.	Mont., Idaho, Wyo., Utah, Colo.
IX	---	13	Washington, Oregon
X	7	14, 15 and Ariz.	California, Nevada, Arizona
XI	4	16	All Canada.

Lest these temporary super-regions attain some undue standing, no map of them has been prepared and no argument is made for them. They are strictly an expedient. It may be mentioned that the tabulation of the rating forms from only 54 judges involved the entering of nine values for every iris reported on every return. This involved about 2,700 entries and a double set of additions and calculations for each variety in each super-region. It is obviously impractical to present in one issue of the BULLETIN all of the results obtained but the tables accompanying this report should indicate the more important facts of iris performance in the different regions.

Needless space would be taken by a description of the computation method in the body of this report but full details of procedure are given in Appendix A. The introduction of ratings for rot, leaf spot and borer susceptibility has necessarily introduced a new method of evaluation. While the plant, the stalk and the flower are definite physical things than can be seen and measured, things like immunity, tolerance or susceptibility to bacteria, fungi and insects are somewhat intangible to the ordinary observer and can be determined accurately only by elaborate scientific procedure.

No attempt has been made to incorporate susceptibility in a qualitative score for confusion would result. In conformity with established procedure, the susceptibility of varieties to rot, leaf spot and borer has been tabulated as reported by observers and is listed as a series of "fault points" which are indicative only and should not be taken as quantitative values to be subtracted from the qualitative score.

Before examining the results as shown in the tables the rating instructions should be reviewed. The instructions were:

"To simplify rating procedure the characters to be scored have been limited to those most influenced by the environment and the most serious diseases.

"The performance of a variety with respect to individual traits should be recorded as either, 1, very adequate or superior, 2, average or satisfactory, 3, inferior or unsatisfactory. To receive a rating of 1, the plant should be very vigorous and produce satisfactory increase, the flower should have sufficient substance to withstand local weather conditions with the exception of severe storms and the color of the fully opened flower should not fade appreciably. The stalks should attain the height characteristic of the variety and have sufficient rigidity to remain erect during the blooming period. Winter hardiness should be scored only for varieties that had no winter protection, and a rating of 1 should not be given unless the variety is capable of surviving severe winters with little or no injury to the flower stalk. Resistance to rot, leaf spot and borer should be indicated by a rating of 1 only if the variety is little or not at all affected in the presence of moderate or heavy infestation."

As has been observed in the case of Symposium and Permanent Rating returns, there seems to be a greater difference in judges than there is in iris varieties because in their returns it has been



noticed that judges living only a few miles apart occasionally have rated the same variety as much as 50 per cent differently. This is very evidently due to the use of widely different standards of perfection or ideals. On some returns the valuation "1" was almost absent entirely while on many others "1" was predominant. It is apparent that one of the foremost problems of the Regional Performance Rating program is the adoption and effective use of a standardized rating procedure.

APPENDIX "A"  
*Computation Procedure*

In the performance rating questionnaire judges expressed their opinion of a variety by assigning the numbers 1, 2 or 3 to each of the six iris characters specified. For example a judge scored one variety as follows:

Plant:	Vigor .....	1
	Hardiness .....	2
Flower:	Substance .....	3
	Color .....	2
Stalk:	Height .....	1
	Stiffness .....	3
	Total .....	12

With this rating on the forms, the problem is to reduce it to a representative and useful percentage score, which is demanded for comparative purposes. Several procedures are available but some of the easiest and most likely will be considered and discussed.

It will be seen that the point values given in Column A are debit rather than credit values. A "3" is much lower than a "1" instead of higher. To obtain percentage figures these values must be reversed and unitized. As above expressed a perfect single score for one variety would be "6," while the lowest possible score would be "18." Therefore, 6 would be equivalent to 100 while 18 would be equivalent to zero and the difference of 12 would be equivalent to the whole 100 point range.

The total score of Great Lakes from 10 judges in super-region I was 70. Since 60 ( $10 \times 6$ ) would have been perfect, one method of computing a percentage score would be to divide 60 by 70 and obtain a direct score of 85.71. This might be called a percentage of par of the judges who rated Great Lakes. Similarly, Jasmine with 4 ratings for a total of 41 would have a score equal to  $(4 \times 6) \div 31 = 77.42$ ; and Lady Mohr with 7 ratings for a total of 51 would

have a score of  $(7 \times 6) \div 51 = 82.35$ . This is a simple and practicable method of computing percentage scores and was the method of computing initial values in the tables.

Another method is to simply reverse the values in such a way that a "1" rating in each of the six sections counts 3 while a "3" rating counts 1. Thus the highest single score for a variety would be 18 and the lowest 6 and the difference would be equivalent to 100 points. By this procedure Great Lakes would have a gross score of 170 points or a net score of  $170 (10 \times 6) = 110$  points as compared with a par score of  $180 (10 \times 6) = 120$  points. The percentage score becomes  $110 \div 120$  or 91.66, while Jasmine similarly scores 85.42 and Lady Mohr 89.28.

It will be observed that the range of 77.42 to 85.71 by the first method is somewhat more than the range of 85.42 to 91.66 by the second method.

Still another method of determining an initial rating is by the average score system employed in computing symposium results. By this method a value of 10 would be assigned all "1" ratings, a value of 8 to all "2" ratings and 6 to all "3" ratings. The total score for a variety divided by the number of votes gives the average rating. By this method, in the present illustration, Great Lakes would receive an average rating of 80.00; Jasmine 65.00 and Lady Mohr 74.29. The effect of this method is to deduct 2 points from the total possible score of each variety ( $10 \times n$ ) for each point by which its simple additive score (as determined in paragraph 1) exceeds par (number of ratings  $\times 6$ ). By making the values of the 1, 2 and 3 ratings equal to 10, 9 and 8 instead of 10, 8 and 6, the comparative scores become 90.00, 82.50 and 87.14.

Any one of these methods or modifications thereof may be used in a tabular computation of this nature. For the obvious reasons of ease and practicability and the lack of any additional assignment of arbitrary values, the first method described has been used in these computations.

In any contest where the number of judges acquainted with and voting for a list of varieties varies widely, as in the present case, the accuracy and value of the composite score is directly proportional to the number of judges voting, unless each judge carries a personal ability rating. Since judging is essentially a process of critical comparison, it follows that a judge who knows 90 or 95 of the 100 given varieties would have an opinion of greater value than



*Right. Mrs. G. G. Pollock, Prominent irisarian from Sacramento, smiles for the cameraman.*



*Left, John C. Wister, first President of the A.I.S., is a contributor to *The Iris*,—an Ideal Hardy Perennial. Don't miss his essay on the history of our Society.*



the judge who knows only 25 or 30 varieties. Even judges of similar knowledge may have different ideals and criteria of comparison.

Consequently, the fewer ratings a variety receives, the less accurate and less credible the resulting score, for it is obvious that two or three judges by coincidence might give a variety either a perfect score or else damn it utterly. This wouldn't make sense so methods are used to counteract the effect of low-number coincidence. The most common of these is to refrain from even considering a score until a relatively high percentage of voting judges has rated the variety. Another and simpler method is to multiply the initial rating by the percentage of the total number of judges that have rated the particular variety. Thus, if only 60 per cent of the number of judges rated an iris a composite 90.00, the discounted score would be  $90.00 \times 60 = 54.00$ . This procedure practically assures an iris of an improved rating year after year as more judges see it, while the rating of an iris seen by all judges tends to decline slowly and steadily. The tables accompanying this report give both the initial rating and the discounted ratings so that either or both may be used for some particular purpose.

As an illustration of this particular procedure the same three irises will be used. Eleven judges of Region I participated but only 10 rated Great Lakes; 7 rated Lady Mohr and 4 rated Jasmine. The initial ratings are accordingly multiplied by 10/11; 7/11 and 4/11 respectively with the result that the 85.71 initial rating of Great Lakes becomes 77.92; the Lady Mohr initial rating of 82.35 becomes 52.40; and the Jasmine initial of 77.42 becomes 28.15.

If the discounted rating seems a bit too severe and the initial rating a bit high for uncommon varieties, a simple average of the two would give what might be called a balanced rating. The balanced ratings of the three varieties discussed, would be: Great Lakes 81.81; Lady Mohr 67.37, and Jasmine 52.78. The numerical ratings in the tables are all balanced ratings as thus computed.

TABLE IV  
PERFORMANCE RATINGS  
SUPER-REGION IV  
Ohio, Md., Ill., Ky. and So. Mich.

<i>Variety</i>	<i>Times Rated</i>	<i>Balanced Rating</i>	—Fault Points—			
			<i>Rot</i>	<i>Spot</i>	<i>Borer</i>	<i>Total</i>
1. Great Lakes .....	7	97.63	3	2	3	8
2. Ola Kala .....	6	85.76	--	--	1	1
3. Elmohr .....	3	84.00	1	4	1	6



<i>Variety</i>	<i>Times Rated</i>	<i>Balanced Rating</i>	<i>—Fault Points—</i>			
			<i>Rot</i>	<i>Spot</i>	<i>Borer</i>	<i>Total</i>
4. Berkeley Gold .....	6	83.55	--	1	--	1
5. Christabel .....	7	80.75	--	1	1	2
6. Angelus .....	6	79.61	1	--	2	3
7. Treasure Island .....	6	79.61	1	1	1	3
8. Amigo .....	7	79.23	1	2	4	7
9. Master Charles .....	4	78.57	--	--	--	--
10. Indiana Night .....	5	77.93	2	1	1	4
11. Snow Flurry .....	7	76.36	1	1	1	3
12. Cascade Splendor .....	4	74.84	1	1	--	2
13. Chivalry .....	4	74.84	--	--	--	--
14. Elsa Sass .....	6	74.30	1	2	1	4
15. Matterhorn .....	6	74.30	2	--	1	3
16. Golden Majesty .....	7	73.70	1	1	1	3
17. Wabash .....	7	73.70	2	3	5	10
18. Bandmaster .....	5	73.45	--	1	--	1
19. Minnie Colquitt .....	5	73.45	1	1	1	3
20. Harriet Thoreau .....	5	71.42	--	--	--	--
21. Blue Shimmer .....	6	71.15	1	2	1	3
22. Spun Gold .....	7	70.00	6	3	5	14
23. Sable .....	6	69.69	1	1	1	3
24. Los Angeles .....	7	68.85	7	4	5	16
25. The Red Douglas .....	7	68.85	2	2	2	6
26. Golden Fleece .....	5	67.68	--	--	2	2
27. Mulberry Rose .....	5	67.68	3	3	3	9
28. Ranger .....	5	67.68	1	2	1	4
29. Missouri .....	6	66.88	1	3	2	6
30. Bryce Canyon .....	5	65.44	2	1	--	3
31. Red Valor .....	5	65.44	1	1	1	3
32. Captain Wells .....	5	64.30	--	--	--	--
33. Gloriole .....	7	63.66	6	7	8	21
34. Ann Newhard .....	5	62.75	2	2	2	6
35. Priscilla .....	5	62.75	--	3	1	4
36. Snow Velvet .....	5	62.75	4	4	4	12
37. Daybreak .....	5	61.70	4	2	3	9
38. Pink Reflection .....	5	61.70	--	1	1	2
39. Azure Skies .....	6	61.51	4	1	3	8
40. Firecracker .....	6	61.51	2	2	2	6
41. Lady Mohr .....	3	61.23	--	--	--	--
42. Cloud Castle .....	3	59.30	1	1	1	3
43. Fair Elaine .....	5	58.45	3	2	3	8
44. Ming Yellow .....	5	58.45	4	3	4	11
45. Stardom .....	5	58.45	2	2	2	6
46. Chamois .....	3	58.40	1	--	--	1
47. City of Lincoln .....	7	58.08	2	2	5	9
48. Prairie Sunset .....	7	56.75	1	2	3	6
49. China Maid .....	7	56.26	4	5	5	14
50. Red Gleam .....	5	55.90	2	4	1	7
51. Grand Canyon .....	3	55.90	1	1	1	3
52. Nightfall .....	4	55.46	--	--	1	1
53. Old Parchment .....	4	55.46	2	3	3	8
54. Tiffanja .....	4	53.90	1	1	1	3
55. White Wedgewood .....	4	53.90	1	1	1	3
56. Deep Velvet .....	5	52.50	4	3	4	11
57. Golden Treasure .....	5	52.50	2	3	5	10
58. Garden Glory .....	4	52.35	--	--	--	--
59. The Admiral .....	4	52.35	1	1	1	3

<i>Variety</i>	<i>Times Rated</i>	<i>Balanced Rating</i>	<i>—Fault Points—</i>			
			<i>Rot</i>	<i>Spot</i>	<i>Borer</i>	<i>Total</i>
60. Shining Waters .....	5	51.45	5	3	4	12
61. Garden Flame .....	3	51.44	1	1	1	3
62. Katherine Fay .....	3	51.44	3	3	3	9
63. Moonlight Madonna .....	4	51.00	2	2	2	6
64. Tobacco Road .....	5	50.40	3	4	1	8
65. Casa Morena .....	4	49.88	3	2	1	6
66. Spindrift .....	4	49.88	3	2	1	6
67. Dream Castle .....	4	49.63	1	1	1	3
68. Arctic .....	5	49.02	6	4	5	15
69. Brown Thrasher .....	4	48.36	3	1	1	5
70. Pink Ruffles .....	3	47.59	1	1	1	3
71. Ormohr .....	5	46.75	2	--	3	5
72. Alba Superba .....	3	44.36	1	1	1	3
73. Caroline Burr .....	4	37.70	5	4	4	13

PERFORMANCE RATINGS  
SUPER-REGION 8  
(California, Arizona and Nevada)

<i>Variety</i>	<i>Times Rated</i>	<i>Balanced Rating</i>	<i>—Fault Points—</i>			
			<i>Rot</i>	<i>Spot</i>	<i>Borer</i>	<i>Total</i>
1. Los Angeles .....	7	97.66				
2. Shining Waters .....	7	97.66				
3. Alba Superba .....	6	92.86				
4. Berkeley Gold .....	6	90.35				
5. Elmohr .....	6	90.35				
6. Ola Kala .....	6	90.35				
8. Priscilla .....	6	87.98				
7. Lord Dougan .....	6	87.98				
8. Priscilla .....	6	87.98				
9. Fair Elaine .....	7	87.50				
10. Golden Majesty .....	7	87.50				
11. Great Lakes .....	7	87.50				
12. Snow Carnival .....	6	87.80				
13. The Admiral .....	6	85.80				
14. Blue Rhythm .....	5	85.72				
15. Bryce Canyon .....	5	85.72				
16. Chivalry .....	5	85.72				
17. Kathryn Fay .....	5	85.72				
18. Sable .....	7	84.00	--	1	--	1
19. Mary Vernon .....	5	82.98				
20. Misty Gold .....	5	82.98				
21. Francelia .....	5	82.98				
22. Lady Mohr .....	6	81.57				
23. Mulberry Rose .....	6	81.57				
24. Snow Flurry .....	6	81.57				
25. Jasmine .....	5	80.35				
26. Grand Canyon .....	6	79.56				
27. White Wedgewood .....	5	77.92				
28. Tobacco Road .....	6	76.92				
29. Christabel .....	7	76.35				
30. Deep Velvet .....	5	75.65	1	1	--	2
31. Treasure Island .....	5	75.65				
32. Cascade Splendor .....	4	75.42				
33. Extravaganza .....	4	75.42				
34. Blue Shimmer .....	6	74.30				



<i>Variety</i>	<i>Times Rated</i>	<i>Balanced Rating</i>	<i>—Fault Points—</i>			
			<i>Rot</i>	<i>Spot</i>	<i>Borer</i>	<i>Total</i>
35. Lake George .....	6	74.30				
36. Azure Skies .....	5	73.45				
37. Golden Fleece .....	5	73.45				
38. Caroline Burr .....	3	71.43				
39. Chamois .....	3	71.43				
40. Nightfall .....	3	71.43				
41. And Thou .....	6	69.65				
42. Wabash .....	6	68.23	--	1	--	1
43. Goldbeater .....	3	67.72				
44. Ormohr .....	5	67.70				
45. Remembrance .....	5	67.70				
46. Ranger .....	6	66.83				
47. Arctic .....	5	65.94	--	1	--	1
48. Old Parchment .....	5	65.78				
49. Spindrift .....	6	65.55				
50. Garden Glory .....	4	65.04				
51. Tiffanja .....	6	64.33				
52. China Maid .....	6	64.33				
53. Lake Breeze .....	5	64.30				
54. Master Charles .....	4	62.85				
55. Moonlight Madonna .....	4	62.85				
56. Solid Mahogany .....	4	62.85				
57. Pink Reflection .....	5	62.58				
58. Elsa Sass .....	6	61.91				
59. Bandmaster .....	3	61.18				
60. Matterhorn .....	5	61.14				
61. Cloud Castle .....	4	60.83				
62. Golden Treasure .....	4	60.83	--	1	--	1
63. Mellowglow .....	4	60.83				
64. Spun Gold .....	4	60.83				
65. The Red Douglas .....	6	59.70				
66. Violet Symphony .....	3	58.49				
67. City of Lincoln .....	5	57.16				
68. Firecracker .....	5	57.16				
69. California Peach .....	6	56.63				
70. Amigo .....	5	55.90				
71. Ming Yellow .....	3	55.90				
72. Mount Hermon .....	3	55.90				
73. Pink Ruffles .....	3	55.90				
74. Snow Velvet .....	3	55.90				
75. Daybreak .....	6	54.83				
76. Dream Castle .....	3	53.58				
77. Prairie Sunset .....	5	54.22				
78. Captain Wells .....	4	52.38				
79. Brown Thrasher .....	4	50.96				
80. Red Valor .....	4	46.02				

PERFORMANCE RATINGS  
SUPER-REGION I  
(New England and New York)

<i>Variety</i>	<i>Times Rated</i>	<i>Balanced Rating</i>	<i>—Fault Points—</i>			
			<i>Rot</i>	<i>Spot</i>	<i>Borer</i>	<i>Total</i>
1. Great Lakes .....	10	81.80	5	2	2	9
2. Wabash .....	10	81.80	1	2	1	4

<i>Variety</i>	<i>Times Rated</i>	<i>Balanced Rating</i>	<i>—Fault Points—</i>			
			<i>Rot</i>	<i>Spot</i>	<i>Borer</i>	<i>Total</i>
3. Christabel .....	9	81.50	--	1	--	1
4. Tiffanja .....	8	78.78	1	2	1	4
5. Lord Dongan .....	10	75.43	2	2	--	4
6. Mary Vernon .....	8	75.35	--	1	1	2
7. Mount Hermon .....	8	75.35	2	1	1	4
8. Los Angeles .....	10	74.35	5	2	1	8
9. Angelus .....	8	69.10	1	1	1	3
10. Francelia .....	7	67.38	1	2	1	4
11. Lady Mohr .....	7	67.38	2	2	1	5
12. Indiana Night .....	8	66.83	3	3	3	9
13. Chivalry .....	6	66.23	--	1	1	2
14. Snow Carnival .....	6	66.23	1	1	1	3
15. City of Lincoln .....	7	66.11	--	2	1	3
16. Sable .....	8	65.80	5	2	2	9
17. Captain Wells .....	9	65.43	2	3	2	7
18. Gloriola .....	9	65.43	7	4	3	14
19. Fair Elaine .....	9	64.88	3	3	2	8
20. Azure Skies .....	8	64.75	3	3	2	8
21. Master Charles .....	6	64.70	3	3	1	7
22. Ola Kala .....	8	63.73	--	1	1	2
23. Pink Reflection .....	8	63.73	1	2	1	4
24. Spun Gold .....	8	63.73	2	4	1	7
25. Nightfall .....	6	63.24	2	2	1	5
26. Sharkskin .....	6	63.24	1	1	1	3
27. Golden Treasure .....	9	62.90	4	3	5	10
28. Cloud Castle .....	8	62.78	4	3	5	12
29. And Thou .....	8	62.78	1	1	1	3
30. The Red Douglas .....	9	62.17	1	1	2	4
31. Missouri .....	8	61.87	2	2	2	6
32. Berkeley Gold .....	6	61.81	1	1	1	3
33. Daybreak .....	9	61.35	4	5	3	12
34. Red Gleam .....	7	61.33	2	3	1	6
35. Mulberry Rose .....	7	61.33	1	1	1	3
36. Snow Flurry .....	10	60.94	7	5	2	14
37. Golden Majesty .....	8	60.93	2	2	3	7
38. Prairie Sunset .....	10	60.28	4	4	3	11
39. Amigo .....	8	60.08	2	2	2	6
40. Priscilla .....	7	59.24	3	2	1	6
41. China Maid .....	8	59.19	7	4	5	16
42. Matterhorn .....	8	59.19	7	7	4	18
43. Ormohr .....	6	59.18	2	1	1	4
44. The Admiral .....	6	59.18	2	1	1	4
45. Stardom .....	7	58.26	2	2	1	5
46. Violet Sympathy .....	9	57.75	4	3	2	9
47. Ming Yellow .....	9	57.45	1	--	1	2
48. Katherine Fay .....	7	57.25	3	2	2	7
49. Grand Canyon .....	6	56.75	1	--	--	1
50. Bryce Canyon .....	7	56.34	2	2	2	6
51. Spindrift .....	7	56.34	3	3	1	7
52. Shining Waters .....	8	56.33	7	4	2	15
53. Treasure Island .....	7	56.32	3	3	2	8
54. Anne Newhard .....	6	55.63	2	--	1	3
55. Chantilly .....	6	54.55	1	1	1	3
56. Redwyne .....	5	54.53	1	1	1	3
57. White Wedgewood .....	5	54.53	2	2	2	6
58. Moonlight Madonna .....	5	53.23	2	1	1	4



<i>Variety</i>	<i>Times Rated</i>	<i>Balanced Rating</i>	<i>—Fault Points—</i>			
			<i>Rot</i>	<i>Spot</i>	<i>Borer</i>	<i>Total</i>
59. Red Valor .....	5	53.23	1	1	1	3
60. Snow Velvet .....	5	53.23	2	1	1	4
61. Jasmine .....	4	52.79	2	2	2	6
62. Elmohr .....	6	52.48	1	3	2	6
63. Pink Ruffles .....	5	52.07	1	1	2	4
64. Elsa Sass .....	6	51.52	1	1	1	3
65. Suzette .....	4	51.14	2	2	2	6
66. Tobacco Road .....	7	50.54	5	3	3	11
67. Blue Shimmer .....	7	49.80	4	3	3	10
68. Lake Breeze .....	4	49.34	1	1	1	3
69. Brown Thrasher .....	7	48.39	3	3	2	8
70. Bandmaster .....	4	48.14	4	2	2	6
71. Lake George .....	4	48.14	2	1	1	4
72. Gold Bearer .....	4	46.77	1	1	1	3
73. Louise Blake .....	4	46.77	2	3	2	7
74. Firecracker .....	5	46.44	1	1	1	3
75. Caroline Burr .....	7	46.43	4	4	5	13
76. California Peach .....	7	45.87	4	2	2	8
77. Old Parchment .....	6	45.63	6	5	—	11
78. Cascade Splendor .....	4	45.46	1	1	1	3
79. Arctic .....	6	43.46	6	5	2	13
80. Deep Velvet .....	6	42.97	7	3	2	12
81. Alba Superba .....	5	40.38	4	3	1	8
82. Garden Flame .....	4	37.00	2	3	2	7

(Part 2 to follow in January issue of the BULLETIN)

## FERTILITY RECORDS

JOHN DOLMAN, JR.

Dear Professor Dolman:

I haven't made as thorough a study of the various factors effecting crossability as you have but my experience as far as it goes is in good agreement with your results, with one exception. I often pollinate freshly opened blooms which have the receptive surface of the stigma tightly appressed to the style. In fact I do this purposely to reduce the possibility of contamination. And I know at least one very successful hybridizer who regularly makes bud pollinations believing this to be the most favorable time to make crosses.

I am taking the liberty of sending your tabulations to the BULLETIN. I think such an article would interest many hybridizers and might stimulate others to make similar studies or assemble data of the same sort that they already have. We need to know more about fertility in iris, and your observations are a good beginning in the right direction.

Sincerely yours,  
L. F. RANDOLPH

My dear Dr. Randolph:

Here are the tabulations from my cross book that I promised to send you.

As I look them over, they seem very insignificant, partly because the numbers are too small to establish an average, and partly because the determining factors may be quite irrelevant to the factors tabulated, or may be in terms of certain coordinations of the tabulated factors not shown in the tabulations. The whole study convinces me more than ever that the important factor is not time alone, or weather alone, or the choice of pod parent alone, but a combination of affinity between the two parents and reasonably decent physical conditions.

A case in point is Flora Zenor, listed usually as a difficult mother. In ten crosses in three years I got only one take. But this year, heeding your request, I tried again, making nine tries with one pollen (from a seedling of mine out of Melitza  $\times$  Golden Eagle) and getting eight good pods. I just struck the right combination for the crosses were not all made the same day or time of day.

The tabulation on time of day shows little except that the extremes may be bad. The one on weather is hard to analyze because there is so much overlapping; some of the sunny days were hot and some cool, some humid and some dry. And unfortunately I have few notes on the condition of the pollen and the age of both flowers. I am fairly sure of one thing, and that is that the freshly opened flower is a poor parent either way; it is not a good pod parent until the stigma opens, and not a good pollen parent until the stamen opens. The tabulation on day of season must be studied in relation to the fact that it usually rains here more persistently the first week than the last. The net result of all my study is to give me less confidence in factual analysis and more in the good old hunch.

Sincerely,  
JOHN DOLMAN, JR.

#### POD FERTILITY OF BEARDED IRIS

Pod Parent	Tries	Takes	%
Allumeuse .....	6	0	0
Alta California .....	12	1	8.3
At Dawning .....	4	3	75
Baldwin .....	8	3	37.5



Pod Parent	Tries	Takes	%
Bandmaster	8	7	87.5
Belmont	7	7	100
Bisque*	25	13	52
Black Ruby*	12	10	83.3
Blue Rhythm	6	3	50
Blue Zenith	2	1	50
Buttercup Lane	3	1	33.3
California Gold	16	1	6.2
Castalia	4	3	75
Cherry Ice*	9	7	77.7
Cherryluska*	16	8	50
China Maid	5	0	0
Copper Lustre	6	3	50
Cyrus the Great	9	7	77.7
Dauntless	3	2	66.6
Destiny	3	0	0
Dubrovnik	5	3	60
Dymia	3	2	66.6
Eclador	8	0	0
Evolution	8	6	75
Flora Zenor	( '44-'46) 10	1	10
Flora Zenor	, ( '47) 9	8	88
Frank Adams	22	6	27.3
Gloriole	16	6	37.5
Gold Foam	4	4	100
Golden Eagle	6	5	83.3
Golden Hind	2	2	100
Golden Majesty	14	9	64.2
Golden Spike	2	2	100
Gudrun	16	4	25
Happy Days	16	8	50
Indian Chief	4	3	75
Jelloway	14	5	35.7
Junaluska	3	2	66.6
Katharine Fay	4	2	50
Ladylike*	5	1	20
Lighthouse	3	0	0
Loomis V-20	5	2	40
Los Angeles	22	8	36.3
Ludmilla*	53	37	69.8
Melitza	48	15	31.2
Ming Yellow	13	5	38.5
Miss California	13	6	46.1
Moonglo	15	0	0
Morocco Rose	5	5	100
Naranja	3	2	66.6
Orloff	5	3	60
Ozone	8	0	0
Persia	3	0	0
Pink Epilogue*	30	18	60
Pink Jewel	12	12	100
Prairie Sunset	5	3	60
Rameses	20	8	40
Royal Coach	9	3	33.3
Sable	10	2	20
Sandia	5	0	0
San Diego	4	4	100
San Francisco	9	3	33.3

Pod Parent	Tries	Takes	%
Sensation .....	6	5	83.3
Serenite .....	5	4	80
Sierra Blue .....	3	1	33.3
Shah Jehan .....	5	0	0
Sibley* .....	23	10	43.4
Siegfried .....	9	3	33.3
Smolder .....	3	2	66.6
Snowking .....	6	0	0
Stardom .....	3	1	33.3
Spindrift .....	10	7	70
Sunol .....	22	4	18.2
The Black Douglas .....	3	1	33.3
The Red Douglas .....	15	7	46.6
Tiffany .....	10	3	30
Valor .....	14	8	57.1
Wabash .....	22	4	18.2

\*Dolman seedlings, registered but not introduced.

#### FERTILITY CORRELATED WITH TIME OF DAY

Eastern Standard Time	Tries	Takes	%
6 to 7 a.m. ....	4	2	50
7 to 8 a.m. ....	18	6	33.3
8 to 9 a.m. ....	73	26	35.6
9 to 10 a.m. ....	102	35	34.3
10 to 11 a.m. ....	116	57	49.1
11 to 12 a.m. ....	93	46	49.4
12 to 1 p.m. ....	32	15	46.8
1 to 2 p.m. ....	110	51	46.3
2 to 3 p.m. ....	134	71	52.9
3 to 4 p.m. ....	195	98	50.2
4 to 5 p.m. ....	166	72	43.4
5 to 6 p.m. ....	71	28	39.4
6 to 7 p.m. ....	110	44	40
7 to 8 p.m. ....	27	6	22.2

#### FERTILITY CORRELATED WITH WEATHER CONDITIONS

Weather conditions	Tries	Takes	%
Bright Sunshine .....	585	252	43
Cloudy or partly cloudy .....	306	117	38.2
Relatively hot .....	154	63	40.9
Relatively cool .....	84	39	46.4
Excessively humid .....	273	115	42.1

#### FERTILITY CORRELATED WITH PROGRESS OF HYBRIDIZING SEASON

Day of Hybridizing Season	Tries	Takes	%
First .....	44	21	47.7
Second .....	83	35	42.1
Third .....	82	36	43.9
Fourth .....	75	38	50.6
Fifth .....	42	22	52.4
Sixth .....	131	57	43.4
Seventh .....	121	73	60.3
Eighth .....	100	44	44
Ninth .....	115	38	33
Tenth .....	90	32	35.5



Day of Hybridizing Season	Tries	Takes	%
Eleventh .....	150	59	39
Twelfth .....	103	44	42.7
Thirteenth .....	38	12	31.5
Fourteenth .....	50	28	56
Fifteenth .....	38	19	50
Sixteenth .....	23	8	34.8
Seventeenth .....	7	1	14.2
Eighteenth .....	11	3	27.3



Photo by Sam. Y. Caldwell

*Mary Vernon (McKee '42), brilliant variegata blend, in President Cook's garden, Evanston, 1947.*



## ANCIENT SYMBOLISM—FLEUR-DE-LUCE

RALPH C. ERSKINE, N. C.

There is good reason to believe that even the French name, fleur-de-lis means rather *flower of brightness* than flower of lily, for the ancient French meaning of *lis* is whiteness or brightness. *Lucent*, from the ancient Latin *lucentum*, means luminous, shining.

John Gerard (1545-1612), English herbalist and surgeon, said "the floure de-luce, although it be a water plant of nature, yet being planted in gardens it prospereth well." John Ray, father of English natural history, in his *Catalogus Plantarum* (1660) speaks of "the most common purple Fleur-de-Luce."

In the symbolism of man's evolution through aspiration up from the brute to a being capable of pure reason, THE FLOWER-OF-LIGHT has been used to typify his most exalted thought, his spirit. The transition of this concept of the iris as a symbol of supreme good begins with the first mystery of fire and light as a gift to mankind from the ancient gods. Iris was their messenger and her symbol was the rainbow. The symbol of the *fire of the gods* was the trident, with its three-forked head. Man saw in the shape of the wild iris, luminous, a symbol of supreme good. . . a "spirit moving upon the face of the waters." Shaped like the trident of the gods, this flower in art and heraldry persisted as a talisman of aspiration through all the ages, outlasting his understanding of why it was so chosen.

Today, when the ancient evil has cropped up again that man has no dignity or rights of his own but is the property of the state, meaning a small group of rulers who impose their will through seizure, prison and execution, it is time for us to evaluate the hard won steps through which man emerged. The trident . . . the fleur-de-luce . . . the Trinity, symbol of Christ, "the Light of the world," "the Light that dispels all darkness."

O Sacred Spire that points the Way!  
O spirit's fire that lights the day!  
O Fleur-de-Lis, dear Flower of Light,  
Let us not wander in the night.  
Mute symbol of divine inflowing



That from the days of man's first knowing  
Has lifted him through aspiration  
From sodden brute to divination  
Sustain us still lest we retrace  
The brute beginnings of our race.  
Keep bright the flame of our pure reason  
To lead us through each ageless season.

## IRIS SPECIES IN OKLAHOMA

ELEANOR HILL

Iris species have been grown in two gardens. The first garden was situated on the side of a gentle hill midway between top and bottom. Soil was a rich sandy loam, but it lacked sufficient humus to prevent baking in hot weather. Bone meal and superphosphate were used for fertilizer with the addition of leaf mold or peat moss to improve the physical condition of the soil.

The second garden is on the crest of a gentle hill in sand clay soil and there was practically no shade. Fertilizer leaches out quickly and there was none for replacement during the war years except 200 pounds of rock phosphate and the ashes from the fireplace. Before this fertilizer was added a soil test revealed not even a trace of phosphorus or potash. The addition of bales of peat when it could be had and tons of leaf mold have not been sufficient to enable it to retain enough moisture.

Moving day was September 30, 1940—a suitable time for most plants, but not a good one for many iris species. All of the small species that would normally have been transplanted in the spring were soaked in a solution of Vitamin B<sup>1</sup> (one gram to one gallon of water) before planting.

*Hermodactylus tuberosa* was grown in the old garden in a cold frame that was closed during severe winter weather and during the summer so that the stylosas could have a good baking. It never bloomed although it lived five years.

Of the Reticulatas J. C. Dyt, Cantab, *histroides*, *histriodes major*, *danfordiae* and an unnamed blue-purple form have been grown. *Danfordiae* is the most difficult. It blooms only one year, but the small bulbs will persist a year or two after that. It has the fragrance of honey. None of the other forms have lived more than four or five years.

*Sindpers* and *bucharica* were grown in pots so that they could be lifted during the summer. They were kept in the garage until they came up in the spring when they were sunk in the ground. In case of severe freezing weather they were covered or removed to the garage. They bloomed yearly while given this care. After three years the pots were sunk in the ground and left there. *Bucharica* still survives, but does not bloom. Its situation is not a good one because the border in which it is situated is watered during the summer.

Increase may be had from Dutch iris if they are properly treated. A soil that is rich in humus, but has enough coarse sand to be well drained is provided for them. To this is added some bone meal and superphosphate. They are watered during summer. Grown in this manner without lifting increase is slow, but steady. Grown in average soil and with only such water as the Lord provided they decreased even when given the annual lifting that Oregon growers advise. Annual lifting is definitely not the secret of increase in this locality. They have mosaic so should be sprayed frequently or it will be carried to other iris.

English iris are difficult. If the summers are mild and there is ample rainfall they will survive two years. They should be given full shade and the coolest soil possible.

During the drought years, 1934-1938, it was necessary to plant *tectorum* in half shade to keep the foliage from sunscalding. With the return of what we hope is normal weather some plants have been grown satisfactorily in full sun. The white form is not as hardy as the blue. The Armistice day freeze of 1940 killed all but one plant. Both forms are easy to grow from seed and bloom in two years—the same length of time required for purchased plants to bloom. Plants sent as *tectorum lilacini* seem to be identical with *tectorum* except for a taller stem.

*Milesii* was grown successfully in the second garden only. It did not bloom the first season and was invariably winter-killed the second. One plant finally pulled through its second winter and bloomed. The blossom is not as large or attractive as that of *tectorum* and is quite fleeting. The stem is too tall for the size of the flower. The plant did not survive to bloom a second time. The hybrid Pal-tec is a reliable bloomer and perfectly hardy.

The blue form of *cristata* was easy in the first garden, but the white form was difficult until *cristata* was found growing wild and



the type of soil and situation could be noted. All old soil is removed to a depth of at least six inches and replaced with a soil composed of one-third coarse sand and two-thirds sifted compost to which a small amount of fine limestone rock has been added. In this garden in full sun until two or three in midafternoon *cristata alba* survives. Plants that are grown in filtered shade become as rampant as they are in the woods. The form of *cristata* found wild in Arkansas is lovelier than any blue form purchased. The blooms are larger and more highly colored, but they do not bloom freely. A particularly lovely form with two signal patches, one of gold and one of purple, below the crest was received as a gift from a friend. This was chopped up by a wartime helper.

A new planting of *lacustris* survived moving day, but the soil had not been specially prepared for it and it would not live in full morning sun. Later a few plants with small dark flowers that were supposed to be *cristata* were received. These are believed to be *lacustris*. They flourish and set seed in a situation where they receive only evening sun. *Gracilipes* should have the same type of soil. Plants have never survived over three or four years. It is not as well grown here as it is in Eastern gardens. The white form offers no particular difficulties.

Siberian iris should be given extra water if they are to be grown. *Delavayi* is one of the most vigorous of the beardless species. It is not difficult to establish. In the first garden it was grown in full shade, but in this one it has morning sun in a situation near a leaky spigot. It would not win in a beauty contest. *Forresti* usually dies after a couple of years. Hot summers seem to be its Waterloo. After a number of trials we have about despaired of providing it with a cool enough soil. *Chrysographes* and the hybrid Chryso-for are a little less difficult. *Prismatica* is easy if given enough water and the soil does not become exhausted. It was given a spot near the splash basin for a down spout. It has grown out into full sun where the full force of the water coming from the roof hits it.

*Graminea* was difficult to establish, but large clumps proved easier than small divisions. It was grown in filtered shade in the old garden, but in this it has full morning sun and receives a thick mulch of leaf mold in summer. It sets seed prolifically, but the seeds never germinate. This form is not as fragrant as those in other gardens. *Sintenisi* receives full afternoon sun and no care. One season it bloomed constantly for six weeks, but has not been as

obliging since. It is not tender. *Halophila* survives in spite of very poor treatment. The large flowered spurias are not difficult. They are given extra water in the spring so that they will have a good crop of flowers. Even *Ochroleuca* flowers well here. Lack of moisture in summer does not affect blooming if it has sufficient water in the spring.

.Most of the California natives have been tried without success. *Thompsonii* did well for a limited time in the old garden. *Douglasiana alba* flourished in morning sun in this garden and finally bloomed itself to death. A soil such as we use for *crinata* and filtered shade will be provided for the next planting.

All of the Southern species and hybrids are easy. They are grown in well-drained situations and given a great deal of water during the growing season. *Pseudacorus* and *pseudacorus alba* are grown in the perennial border. They are not so leggy as when grown in a pool, but the soil must be constantly enriched as they are gross feeders.

*Ensata* was hard to establish. Seeds would not germinate. A gift plant of its variety *hyacinthiana* was received without enthusiasm because *ensata* had been so difficult. It was slapped at the ground in a situation where there is drainage from the roof if there is any rain. The clump is over one foot through at the base and its arching foliage covers an area more than four feet in diameter. We had tried to remove portions of it, but the clump is too tough to cut with a shovel. It has borne as high as 125 blooms open at a time and makes a very attractive border plant. The foliage is used to weave mats that are used under flower arrangements. *Setosa* and *hookeri* are easy. Both were grown in full sun. The *Stylosas* are not reliably hardy over a long period of years. They are winter hardy, but must be protected from severe cold after they have started into growth in the spring. They have not been grown in a cold-frame in this garden. As with other species the white form is less hardy than the colored ones. *Verna* is not long lived. We must work constantly to keep the soil acid. Twice we have lost the tree that shaded it. Shade seems to be necessary here, because it died immediately. *Missouriensis*, *laevigata semperflorens* and *acorioides* bloomed once. *Arizonica*, *ruthenica* and *foetidissima* lived one year, but did not bloom.

Even in this dry climate *Regelias* and onco-breds do best in raised beds. *Korolkowi* has been one of the most reliable. Unfor-



tunately this garden suffered a severe epidemic of rot while these types were being tried. Plants were lifted and sunned so much that the markers were lost and they can no longer be identified although many of the varieties are still alive.

*Mellita* and *flavissima* are long-lived. Both have grown in full sun and afternoon sun only. Sir Michael Foster's form of *variegata* was one of the victims of rot. It gave fall bloom. *Bloudowii* and *mandschurica* died without blooming.

We started growing species to lengthen the iris season. We have found that many are worth growing for their beauty alone; that many are suitable for a small garden; that they provide a test of skill; an opportunity to learn the genus and many blooms suitable for use in flower arrangements.



Photo by L. F. Randolph

*Iris seedlings from embryo cultured seed, in various stages of growth,  
Cornell University.*



## EMBRYO SEED CULTURE—NOTES ON

JEANNE M. PERRIGO, N. Y.

When the May 1945 issue of the BULLETIN arrived, I was intrigued by the article on embryo seed culture by Dr. Randolph and determined that I would try it if I could get the equipment and the necessary chemicals. And so I began the search. The bottles described were unobtainable except in color, but the 1 oz. capsule bottles which I got have been satisfactory. In order to get the chemicals, I had to buy 2 oz. or 4 oz. of some. And the right shaped dissecting needle couldn't be purchased singly—I had to buy a dozen. The handle came with another type of needle. And when I finally located some sphagnum peat for the surface layer of the flat to which the seedlings were to be transplanted, I had to buy a half bale of it and was lucky to get that! The hardest thing to find was agar. After trying all the drug stores in town and several chemical supply houses with no success, I finally asked at the laboratory of the station hospital at the Field and was given some which I later discovered was nutrient agar which decidedly was not the right type to use for iris embryos. I was able to get granulated agar when I explained what I wanted. It had taken two trips to New York to get everything needed in time to be used as the iris seed was ready.

My husband thought that I had developed a mild case of insanity! But other devotees of the genus iris have been accused of having the same thing and so it didn't bother me. I was much too busy excising the embryos, and watching them germinate! He was most co-operative in helping me locate the embryo in the seed. I still am unable to find it by the method described by Dr. Randolph but I've developed a technique of my own.

This "Caesarian Operation" is hard to describe because the seeds have different shapes. If the seed is rounded at one end and pointed at the other, I make a very shallow cut across the pointed end with the razor blade—just enough to cut off the brown outer seed coat. If a dense white dot appears in the center of the exposed surface, I make another cut thru the seed lengthwise and as close to this white dot (which is the radicle of the embryo) as I can get without cutting into it. This cuts the seed in two and leaves exposed the embryo which extends about halfway thru the endosperm and is in a case or sac. Then I make a slanting cut across the bottom of the seed below the embryo. Now a slight pressure with



the thumb nail at the base of the embryo may force it up and out at the top where the needle may be used to transfer it to the bottle. If the seeds have just been taken from the pod, there is a sort of stem by which the seed was attached to the pod. Cut into the stem end as that is nearest the radicle.

Just a word or two about the preparation of the stock solutions for the nutrient culture medium. I found that it is better to prepare only one-fourth the quantity given and that is enough to last a long time as only 5 milliliters is used at a time for 7 grams of agar which is sufficient for 125 bottles and with 2 embryos placed in each bottle—5 milliliters is enough for 250 embryos. But it is wise to have a number of bottles prepared with the culture medium and sterilized just in case the embryos have to be transferred in a hurry if contamination develops. I also found that unless stock solution A was sterilized it did not keep very long, even in the refrigerator. And so I put the bottle containing the stock solution in the pressure cooker along with the bottles of the culture medium and processed them all at 15 lbs. pressure for 20 minutes. I cut a circle of wire screening nearly as large as the cooker and placed it over the rack and then put the bottles on the screening. The article does not mention that a set of scales is almost indispensable for weighing the chemicals used—unless one can borrow them or doesn't mind bothering a druggist to do it for him. I bought Eastman photographic scales.

The bottle should be labeled with the number of the cross after the embryos have been placed in it. The easiest way to do this is to write or print the numbers on a narrow strip of paper; cut to the size wanted and fasten on with Scotch tape. Then it can be easily removed to another bottle if necessary to change.

After the embryos have germinated and developed enough to be transplanted to flats in the greenhouse, there are still dangers that have to be guarded against. Sow bugs ate the flats off of about half of the seedlings the first night and so I placed poison bait between the rows and around the flat. The next time, I will be prepared for them and will have the bait ready first. It is almost as harmful to the seedlings to keep the sphagnum peat too wet. Try to impress it upon whoever is going to care for them for you that they should not be watered too much at a time nor too often. I didn't have much success along that line and found the peat green with moss, and many of the seedlings had rotted away. The seedlings are apt

to become rootbound if they are left in the flat too long, in which case they will not bloom the first year as I learned by sad experience.

The results of my work in 1945 were not very encouraging. From 150 seed excised, I transplanted 36 to a flat. The mortality from microorganisms in the bottles had been high. And there were only 19 seedlings to set in the ground the next spring. Only one of those blossomed that year. They will all bloom this spring. They had better be good! But in spite of all the things that had happened, I was not discouraged. I thought that I was to blame in some way and had not followed directions closely enough (I refused to accept the blame for the bugs and the dampness), and that if I tried it again, I would surely have better results by following instructions to the minutest detail.

Well, I was due for further enlightenment. In the summer of '46 I excised 50 seeds for a friend. Altho no contamination developed in the bottles, the embryos turned brown as tho they were dead. By taking them out and scraping them carefully and soaking in a Semesan solution, I was able to save four of them. They developed fans of leaves. Later I did 300 for another friend. I found out after it was too late to do anything about it that they had been spread on papers in the attic to dry while the folks were on their vacation. Some of the seed pods had been rotten when the seeds were harvested. But I was told that drying seeds this way made no difference when the seeds were planted in the ground. It certainly made a difference in this experiment! Within hours, not days, I had microorganisms growing in the bottles at an astounding rate—yeast, and black mold, and green mold, and orange-red mold. ! I worked frantically trying to save those embryos. The only ones that germinated were some from seed that I had dusted with Semesan because they looked and smelled moldy. Then I did some of my own seed that had been dried in the house while we were away on vacation. All of them died the same way.

I was anxious to find out the reason for such disaster. And so I opened a sterile bottle of culture medium and exposed it to the air of the room in which I had been working; then put the top back on and put it in the incubator. To other bottles of fresh agar, I added some of each solution I had been using—alcohol, and S.T. 37. Then I put some in the bottles that had not come in



contact with the embryos. Lastly, I cut a seed open and took out the embryo without first soaking the seed, or bleaching it to surface sterilize it. It was very difficult to do but I finally did it and placed the embryo on the culture medium. Each bottle was labeled and placed in the incubator at the temperature required for the embryos. The solutions that had been in contact with the embryos caused contamination but the others were free of it. Since the one that had not been soaked did not develop contamination, I wondered if the soaking of the seed was to blame. And the fact that Semesan seemed to have a beneficial effect upon the embryos in causing them to germinate, set me to thinking. And so I tried another experiment. I divided different lots of seed into three parts, using one third as a control and proceeding exactly as before: i.e. surface sterilizing for 1 to 2 hrs. in concentrated calcium hypochlorite solution and then soaking in sterile water for three days changing the water each day. The second part was soaked in normal strength Semesan solution for two days without changing the solution. The third part was soaked in the Semesan solution for two days after the outer seed coat had been scraped off as much as possible. The excising was done under the same identical conditions for all 3 parts. The results were as follows: The control embryos developed contamination quickly and all were dead within four days. From 100 seeds in part two and three there were 85 seedlings which were ready to be transplanted from the bottles to the flats late in November, but because of sickness it was about the middle of January before I could take care of them. But that was not part of the experiment in germination. I had proved to my own satisfaction at least, that the surface sterilization of the seed with calcium hypochlorite did not kill the microorganisms which were present on the outer seed coat and were carried into the embryo thru the thin tissue covering the radicle by means of the soaking. And I had proved that normal strength Semesan was highly satisfactory when the outer seed coat was removed. By that method, contamination was practically eliminated. Of course, the best method is to use fresh seeds removed before the seed pods have begun to open. But if the season is especially rainy, the pods may start to rot before the seed is ripe. Then I would harvest the seed and treat it as I did—with normal strength Semesan (1 t. Semesan to  $1\frac{1}{3}$  qts.  $H_2O$ ). Even for freshly harvested air-dried seed; I would use the Semesan solution to soak the seed, since it speeds up

the process by one day in the soaking and the embryos germinate about one day sooner.

The instructions given by Dr. Randolph for culturing the embryos are to keep them in darkness at a temperature of 82° to 86° F. for 3 to 5 days and then at 65° to 85° F. This presented a real problem since it may get quite cold here even in August, especially at night. For the few seedlings cultured in 1945, I placed them in a covered box inside another larger box and heated it with a small light, but I knew that that wouldn't be satisfactory for a large number of bottles and besides, it took too much watching. And so with the help of son James, I constructed an incubator. We bought a water thermostat and switch assembly in the poultry supply department of Sears, Roebuck Co. and installed it in a plywood box 14" x 14" x 11½". The box had a hinged top and a partition 4" down from the top. This partition was set on posts which rested on the bottom of the box and could be lifted out to replace a burned out bulb if necessary. An ordinary 60 watt lamp (or carbon filament lamp could be used) provided the heat for the box. Holes were bored in the partition to allow for circulation of heat. And the light bulb was covered with an aluminum baffle to prevent light rays from going thru the holes and striking the embryos in the bottles which were placed on the partition. Part of the narrow side of the partition was cut away for the thermostat and switch assembly. A brass rod big enough to fit into the switch assembly was threaded 10/32" at a hardware store, and fitted into the thermostat and switch with about two inches protruding. Below this rod a small light socket was screwed on the outside of the box and a small Christmas tree light was used as a pilot light. This was wired to the heat lamp in the bottom of the box. Two wires lead into the box—one to the switch assembly, and one to the heat lamp. 110 V. A. C. is used. Another wire leads from the switch to the heat lamp, completing the circuit.

In the preliminary calibration, the thermostat was unscrewed (by means of the brass rod which protruded from the box) until the light turned on. When the thermometer (which was supported at one end above the partition) reached the start of the temperature range desired (82°), the rod was screwed in until the switch turned the light off. Repeat the process for the 65° to 85° F. range.

The box should have been insulated, but I had to use it before we could get the insulation put on. A wool blanket folded several



times and placed to completely cover the box, served as insulation until the experiment was over.

It would be foolish to minimize the dangers and the risks involved in embryo seed culture. Unless one has seed to practice on that he cares nothing about, it is better not to start. Fortunately, I had a number of insect-pollinated seeds formed while I was away at the annual meeting at Boston. But I lost some good crosses. And I felt nearly as keenly the loss of the seeds I had done for others. However, I shall try again next year. There is a thrill that comes when you watch an embryo curl around and swell as it germinates, and as it sends down a hair-like root and almost at the same time sends up a swelling which becomes a leaf, then two, three, four and five leaves, that makes you realize you are working with God and watching miracles.

## PROGRESS IN PINK\*

BY GEDDES DOUGLAS

We are becoming so accustomed to iris with bright, bushy, tangerine colored beards that we hardly pause to give them a second look. But there was a time, and very recently, when an iris of the so-called "pink-bud" type was a sensation. Even so, the phenomenon of the tangerine beard is not a new one. The first authentic recorded case was "Goldfish," a seedling from Mr. John D. Wareham of Cincinnati, Ohio. Goldfish was small, flaring and buff-fawn in color, but it definitely had the beard. It bloomed in 1925. Next was "Barbarrosa," a blue-purple seedling of Chancellor Jas. H. Kirkland of Nashville, Tenn., and this was closely followed in 1930 by a similar seedling of the late Mr. T. A. Washington, also of Nashville. No particular importance was attached to these iris—they were considered as novelties and little else. In 1933, however, a new type of seedling bloomed for Dr. P. A. Loomis of Colorado Springs, Col. Not only did it have the tangerine beard feature but also the unopened buds were pink, exactly the same color as the ultimate color of the flower. The conventional pink blend, while it may be fairly pink in color, will always show considerable blue in the bud. "Seashell," as the new seedling was called, was the first of these new iris having no blue in the bud, and hence the name for them—"pink buds."

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We must leave the pink-buds for a moment to follow the chronological appearance of the tangerine beards. Here, I think, it should be stated that the cytologists have not decided upon the genetic relation, if any, between the tangerine beard and the pink-bud phenomenon. All iris that have tangerine beards are not pink-buds. The beard may occur on an iris of any color. But so far, there has *not* occurred a pink-bud iris that did not have some variation of the tangerine beard. I say variation advisedly, for in some of the second and third generation seedlings there is a wide color spread in these beards. They come all the way from the palest pink to the deepest blood red; often the color of the beard is exactly the same as the color of the flower.

After the iris "Seashell" the next occurrence of the beard was in California where Prof. Sydney B. Mitchell bloomed a buff-yellow sister seedling to Happy Days which had the beard but unfortunately was of poor substance. However it was such an unusual iris he named it "Isabellina." Isabellina was followed in 1935 by a Dave Hall seedling from Dogrose and Marquissette that had a tangerine beard, but Mr. Hall was never able to carry on the break from this iris. This brings us to the second occurrence of the simultaneous pink-bud-tangerine-beard phenomenon, a seedling of Mrs. Thomas Nesmith, grown in Nashville. It was light pink in color with a flush of gray on the falls, and was later named Melitza. This was in 1939, and in the same year this writer bloomed a pure white seedling again with the now muchly talked of beard. It was named Titian Lady.

The third case of pink-bud tangerine-beard combination was the iris Flora Zenor. This was a Hans Sass seedling, small, flaring but definitely pink. In addition it had a deeper flush of tourmaline pink on the falls, a feature lacking in Seashell and Melitza. A second occurrence of the tangerine-bearded-pink-bud within the Sass line has been reported and the seedling named "Bird of Dawning."

In 1941 the Washington seedling Leilani showed up in time for the Annual Meeting in Nashville, but it is not known whether this seedling is an original occurrence or a second generation seedling from Melitza. Also in 1941 a cross of Midwest Gem  $\times$  Sandia gave Jesse Wills, another Nashville breeder, a lavender seedling with a tangerine beard.

This completes the picture up to the advent of the Dave Hall



“Flamingo-Pinks.” Originally there were four and from different crosses. Dream Girl was a small, clear pale pink. Overture was larger and slightly less pink. Premier Peach was still larger but carried enough yellow in its makeup to give it a definite peachy tone. Lastly, Fantasy was a large rounded flower, deep lavender-pink in color. All had the tangerine beard.

In 1944, BULLETIN 92, (Prelude to Pink) this writer set out to show that all of these occurrences were independent of each other. The genealogy of each line was traced and family trees given. After a thorough study of the whole picture one cannot help but come to the conclusion that no one iris was responsible for all of these events, nor was there any common denominator to them all. They occurred in widely scattered parts of the country. Entirely different lines were involved and it is evident that each hybridizer involved was working entirely independently of the others. Subsequent events have strengthened this viewpoint. Since 1944, there have been several new occurrences of the tangerine beard that did not involve iris carrying that feature. One was a seedling of this writer's which is a rose colored blend coming from (Morocco Rose  $\times$  Sundown)  $\times$  Sunset Serenade. This seedling, No. 538 A, carries a bright tangerine beard.

In the beginning, several of the early breeders of these iris were of the opinion that their particular seedling was the original progenitor of all the other iris of this type, and when several years ago word came to us that a tangerine bearded iris had shown up in England, we in America who had sponsored the theory of independent origin, were much relieved to hear the news. In answer to my letter Mr. Cedric Morris, originator of the iris Edward of Windsor, writes “I am afraid you will find the following notes irritatingly unscientific, but they are the best I can do. There is nothing but Sacramento, Golden Hind and Mary Geddes in Edward of Windsor. About twelve years ago I crossed Sacramento and Golden Hind and got a series of yellow selfs and bad bronzes. I discarded all of these except one yellow self and this I crossed back to Sacramento. The result was more yellows, bronzes and one variegata. On two of the yellows I put Mary Geddes. The results were more yellows, bronzes and two near yellow plicatas. These near-yellow plicatas were crossed together and the results back-crossed to their yellow parents. The resulting seedlings were then crossed together until I got some real yellow plicatas. Eventually

I got a line producing about seventy-five percent yellow plicatas—which I was breeding for. Among these came Edward of Windsor, resulting from crossing two yellow plicata seedlings. Another break and a sister seedling was a citron yellow with a white blaze on the falls. This is now called Benton Asphodel.

“This you will see is the result of twelve years of breeding, and note that there was only one back-cross to the original parent and that was Sacramento—not Golden Hind. I crossed Edward of Windsor which has no pollen to a distant cousin, a yellow self coming from the line of Sacramento × Golden Hind without the admixture of Mary Geddes. The result was nine yellow selfs, (one a full double with six stands and six falls etc.) three bad bronzes and one orange buff with a tangerine beard and with no pollen. The yellow selfs, four with pollen, I put on Edward and await results.

“Last year I got a tangerine bearded onco-bred. I put pollen of Mohrson on Benton Daphne, a pink plicata, the original ancestry of which was ten years of line breeding from Sacramento, Mme. Louis Aureau, San Francisco and Mary Geddes. The result of the Benton Daphne × Mohrson cross was nine seedlings. Three were near plicatas (bad) not unlike Wm. Mohr. Two were yellow selfs showing no oncocyclus tendencies, one standard yellow, two buff pinks and one was a seedling showing marked Oncocyclus descent and **WITH A TANGERINE BEARD.**”

At the close of the 1947 season comes the report of another tangerine bearded break from Prof. Sydney B. Mitchell of Berkeley, California. It is No. 45-18, described as a light rosy-purple with a pronounced tangerine beard. The parentage is Orchid Lady × 40-90. Orchid Lady is (Anne Marie Cayeux × Alta California) × Miss California. 40-90 is (Rosy Asia × 5-12) × Santa Rosa. Rosy Asia is Sherbert × Yellow blend. 5-12 is Rosy Asia × (Dykes × White) × Dejazet. Santa Rosa is Monadnock i.e. (Marquita × Dark Knight) × 5-12. This very complete genealogy shows no tangerine bearded iris in the ancestry.

Second generation seedlings have produced some surprises but also have added materially to our knowledge concerning these iris. When two tangerine bearded iris are crossed together all of the seedlings tend to carry the beard. This writer bloomed some five hundred seedlings of this character in 1947. Also the parents do not necessarily have to be pure pink for the seedlings to come in a relatively pure shade. The Wills Midwest Gem × Sandia, lavender



seedling, when crossed with Leliani, a shrimp-orange colored iris, produced seedlings with pure pink standards and lighter falls. For Mrs. Nesmith, Melitza  $\times$  Leilani gave Azalea much purer in color than either parent. Melitza  $\times$  Prairie Sunset gave a smooth orange-gold with a beard of like color. Jeb Stuart  $\times$  Melitza produced a rosy-mauve, the color of the beard being the same as the color of the flower.

One of the earlier pink-buds is Spindrift, from Dr. Loomis. This comes from Morocco Rose  $\times$  Seashell. For Mr. E. G. Lapham, Spindrift crossed with the tannish Isabellina produced much clearer pinks than might be expected.

Some insight into the genetic behavior of these new pinks has been gained from out-crosses. Many hundreds of out-crosses of tangerine bearded iris have been made to various pinks, blends and the like. Very, very infrequently a tangerine bearded seedling results, rarely a pink-bud. Parentage charts of the few that have occurred reveal that a certain few iris occur over and over in the background. This has led to the theory of the "*Critical Variety.*"

For instance, in the parentage of the Loomis pinks, Morocco Rose is prominent. It also figures in the Dave Hall line. It occurs again in the Douglas seedling 518 a. Orville Fay crossed a conventional pink derived from Morocco Rose with Hall's Overture and got Pink Cameo, one of the most outstanding of the recent pink-bud introductions.

Similarly, in the Hall line the iris W. R. Dykes appears repeatedly. Dykes was one parent of the cross that produced Isabelina. Again it shows up in Golden Hind, one of the three iris in the background of Edward of Windsor.

Other iris are suspected of being "*Critical Varieties.*" To mention a few they are Gudrun, Sherbert, Jeb Stuart, Argentina, Mary Geddes, Rameses and possibly Dauntless and Dolly Madison. The explanation seems to be that the factor for tangerine beard is a recessive and only in rare cases of re-combination is the correct genetic structure possible or probable.

If this theory holds it would seem that the recessive gene for tangerine beard is carried to the seedlings of the so-called "*Critical Varieties.*" Thus the descendants of Rameses, such as Midwest Gem, Prairie Sunset and Sunset Serenade would carry the gene and this would explain the occurrence of the beard among their seedlings.

No tenable hypothesis has been advanced concerning the pink-bud

type of coloration. Returning to them as differentiated from the tangerine bearded iris, great advancement has been made in form, substance and size. Some deepening of color is noted but mostly it is accompanied by an increase in the yellow pigment, so that the effect is apricot or orange-pink.

In the Dave Hall seedlings, 46-14 is a large ruffled flower with a deep reddish beard. It has heavy substance and the character of the individual blossom is delightful. In color it is not much deeper than the small earlier ones. No. 46-16, on the other hand, is much deeper than Overture in color, but has a distinct apricot tone. Of the named Hall varieties Cherie is probably the most outstanding. It is very pure in color, delightfully ruffled and altogether a fine iris. Another outstanding Hall seedling is Radiation, a lavender-pink, smoother than Fantasy, and a much more finished flower. It is a large iris beautifully ruffled and without any haft markings.

The deepest of the peach-pinks is 46-45, a large iris of good height, substance and form. This is definitely headed for naming and introduction. Mr. Hall reports that great advancement was made in the 1947 seedlings as to size and shape. Outstanding were three in delicate shell pink with wide overlapping falls, very wide haft, full rounded flowers with much ruffling. The only seedling which gave indication of an approach to red had striations at the haft—the unpardonable sin in American iris breeding. That other colors are in the offing is indicated by a 1947 seedling in my patch which will be registered under the name of Persian Rose. The bright tangerine beard almost clashes with the light magenta tone of the standards and the deep Persian rose falls. It is a seedling of Pink Cameo  $\times$  [(40-10 variegata  $\times$  Melitza)  $\times$  Flora Zenor].

That the center of pink-bud breeding revolves about Mr. Dave Hall is indisputable. Not only did he obtain one of the original breaks but through intensive inbreeding, clearly demonstrated by the accompanying parentage chart of CHERIE, he has made definite progress. In your correspondent's humble opinion, there are no other pink-bud flowers from any source that compare with his third generation seedlings in size, shape or form, and few compare with them in color.

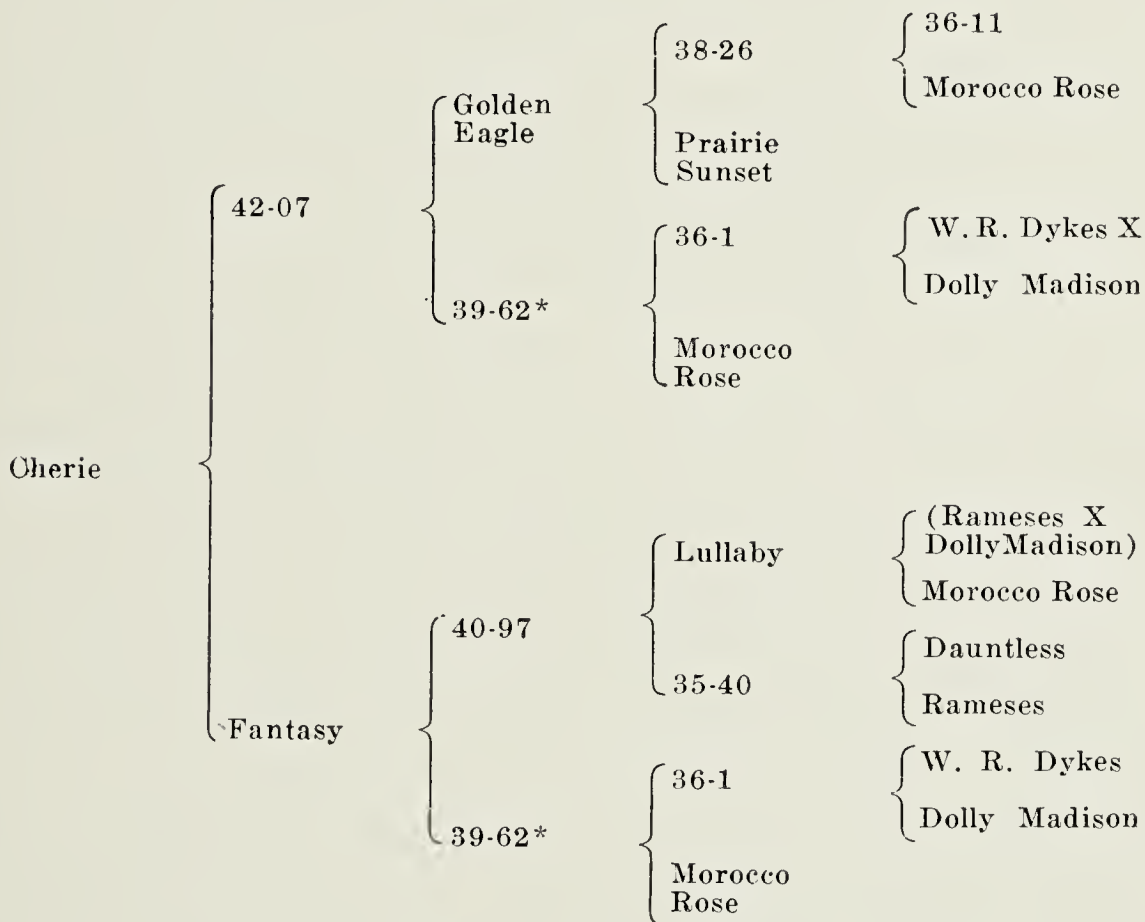
There are three factors, in my estimation, that go to make up a great iris hybridizer—knowledge, intuition and luck. Years of careful work and meticulous record keeping have given Dave Hall



the knowledge. Instinctively he knew which iris to cross with the other when the break came, and thus no time was lost in futile experiments. And lastly luck has played an important part. Frequently a "break" is difficult to cross. Or it lacks pollen, or the weather prevents success in setting seed. But luck was with Dave Hall. He turned the key and the door opened. He is far ahead in the breeding of pink-bud iris—so far ahead that the rest of us can but stand by and cheer.

## FAMILY TREE

### "PINK-BUD" IRIS CHERIE



## OUR MEMBERS WRITE

### *Intermediate Comment*

Having spent most of the day in dividing and replanting my Intermediate irises, a job which must be done every two years because of their vigor and rate of increase, I am now just finishing my first pass at A.I.S. BULLETIN 106 which I found awaiting me after my day in the garden.

Verily, I think the BULLETINS get better and better. Knowing something of the difficulties of maintaining and increasing reader interest, I have only admiration for our editor and his associates who do such a superb job.

Then I come to the list of 1947 awards and honors tucked away in the back instead of in the front as usual, and check it against my own ideas and find that my own batting average is neither spectacular nor mediocre, but just a comfortable average. Then I notice that the varieties Louise Blake and Priscilla have received the Award of Merit as Intermediate varieties and I feel a bit disconcerted—not because I have the slightest objection to these fine varieties receiving the Award of Merit, but because of the confusion that will continue as these two varieties thus become members of the small and select list of Intermediates that have received the A.M. That list now includes Amigo, Black Hawk, Louise Blake, Pink Ruffles, Priscilla and Southland. Other eligibles in 1947 were Joy and Ruby Glow.

What bothers me is the question of what to do with the two new A.M. winners that are in my garden. Should I remove them from their present Tall Bearded environment and put Louise Blake next to Gentius and Golden Bow and Priscilla between Papio and Red Orchid or shall I keep my true Intermediates as they are and make a little group of T B intermediates out in the corner by the Spurias?

It is not difficult to imagine how ineffective these new award winners would be in the bed of true Intermediates. With a different habit of growth, the taller and later blooming Louise Blake and Priscilla would come along as after thoughts. To make the scheme complete, some reliable fall-bloomers should be planted in the group.



I realize, of course, that Priscilla was registered as I B, even though it is the daughter of Purissima and Blue Waves. I know also that Louise Blake was re-registered as an I B, even though it comes from Madame Maurice Lassailly and Wabash. I know, further, however, that Priscilla received an H. M. as a T. B. in 1943 and Louise Blake an H. M. as a T. B. in 1944. Every breeder knows that genetic dwarfs occasionally are found among the offspring of large parents. A midget or even a medium size Percheron from one-ton parents is still a Percheron but the offspring of a mare by a jack is a mule. And so with irises it just doesn't seem fitting that we should call all of the undersized offspring of standard breeds "mules" when there is nothing hybrid about them.

Perhaps this situation will develop to the point where garden irises will be considered as tall, medium and short by the majority of iris growers while the breeders, the purists and the fanciers will have a lingo all their own relating to genetic origin, chromosome numbers, vigor and blooming season. This may be all very well but how in the world is a Check List or catalog description to be written to please everyone? That is an imminent problem.—*Robert E. Allen, N. Y.*

### *Iris missouriensis*

Add another to the list of Iris of the Missouriensis complex that does not fit the key! Stem much longer than the leaves 30 to 36 inches, not 2 or 4 flowers but at least 7. I did not see these in bloom but almost every stem had 7 seed capsules. Most of the seed had shattered but I got some which went to the Editor. This small colony growing in a fence corner near Mancos, Colo., is evidently a Clone.—*A. W. Mackenzie.*

Albuquerque, N. M.: If you want to save time and trouble marking and attaching labels when moving iris or if you want semipermanent markers when you do not want your iris beds cluttered up with labels, write or print the name of the variety on a center leaf of a fan with a china marking pencil, preferably that cheap mechanical pencil named Listo. It will be as permanent as the leaf being perfectly legible when the leaf is dead and dry. It is fine for marking metal labels too.

A. W. M.

Hereafter I do not think I will trim the leaves off when moving iris that are to go back in the ground soon for they seem to take hold faster for the larger leaf surface makes for faster root growth.

A. W. M.

We have had a little pineapppling here in Albuquerque but it did not affect the whole plant. I cut out a lot of the surplus buds as soon as they showed.

A. W. M.

Tasmanian horticulturists are becoming very interested in iris growing, and I, as president of the leading society in Tasmania, am endeavouring to assist and maintain that interest. The Hobart Horticultural Society is one of the oldest in the Commonwealth of Australia and we have been affiliated with the Royal Horticultural Society of England for over 50 years.

It is not generally known in the U. S. A. that Tasmania is the "Island State of the Commonwealth" separated from the mainland by a couple of hundred miles sea journey. Our climate is in many respects similar to that of England though less severe in winter. We hold five two day shows each year and specialize in Gladiolus, Roses, Dahlias, Daffodils and Chrysanthemums, the latter show being held the last week with an entry of about 1,000 blooms. Throughout the year all varieties are grown in the open without any protection and we are credited with being able to produce the best colour of all the states. Iris come into bloom here in October and November and we are arranging classes for iris at the November show.

I trust my enthusiasm has not wearied your patience and with apologies for same, I will conclude with fraternal greetings from Tasmania.—*J. R. Byfield, Tasmania.*

### *Double Iris*

The iris novelty *Japanesque*, is growing in several gardens at Smyrna, including my own.

The editor kindly gave me space in BULLETIN No. 103 to ask if there are others who have double iris. The only answers I received referred me to May Allison.

In the novelty which appeared in my yard the stamens were sacrificed and replaced with three normal standards. I have succeeded in raising one seedling from this "Double Standard," which was single and of a different color.—*Mrs. Robt. L. Motter, Ga.*



### *Plug for Plicks*

I have just glanced at the July BULLETIN and hurrah for the plicatas. I think that like the old Ford joke, every knock is a boost. The more comment there is on plicatas the more attention people pay to them, and the more plicatas we have on the market. My own reaction is that as a class they have much better garden value than the reds and dark purples and the varieties of pattern certainly make them interesting. And after all we look at many of our iris near, too, as well as at a distance.—*Harold W. Knowlton, Mass.*

### *Guest Ethics*

I am not too aware of understanding between hybridizer and display garden owner or other dealers, because I am not a hybridizer. But as a grower and introducer of new items I have felt it to be greatly to my advantage to send out these new introductions far and wide where I know they will appear to advantage in display gardens. Such public appearance greatly helps the sale of the new introductions . . . especially if the iris is truly a good one. In turn what the displayer or grower does with the stock after that doesn't worry me greatly. The gift of the plant to them and later probable sale might help to offset a part of the expense of maintaining a good display garden. At least in our section "good gardeners are hard to find," so is bonemeal, compost, etc., and the maintenance of a display garden is quite a responsibility.

I do appreciate the courtesy of display garden owners writing telling me how much gift iris perform. Not all do that, but even when they don't, I'm still satisfied. But you will note I say "gift" iris, not guest. So likely we are talking about two separate things.

—*Deanette Small—Ind.*

*Lines of Advice to an Iris Lover's Wife*

If he mutters "plicatas" or "new propagation,"  
From out of the depths of his too restless sleep,  
If he discourses lengthily, without invitation,  
On "rhizomes" and "beards"—'til his listeners weep,  
If he's caught in the glow of dawn's early light,  
Down on all fours in the garden somewhere,  
If he ambles about in the black of night—  
Lady, ignore it—it's not a nightmare.  
If he dreams of a "Summer Idyll" with affection,  
And you find the scrawled name "Ella C." in his pocket,  
A fair share of tolerance for his mental defection  
Will help keep your name off the Circuit Court's docket.  
If nothing else works to regain his attention,  
And you've done everything but stand on your head,  
If you'd give up a kingdom for love's resurrection,  
Then, Lady, try planting your own iris bed!

*Mrs. F. Lee Martin.*

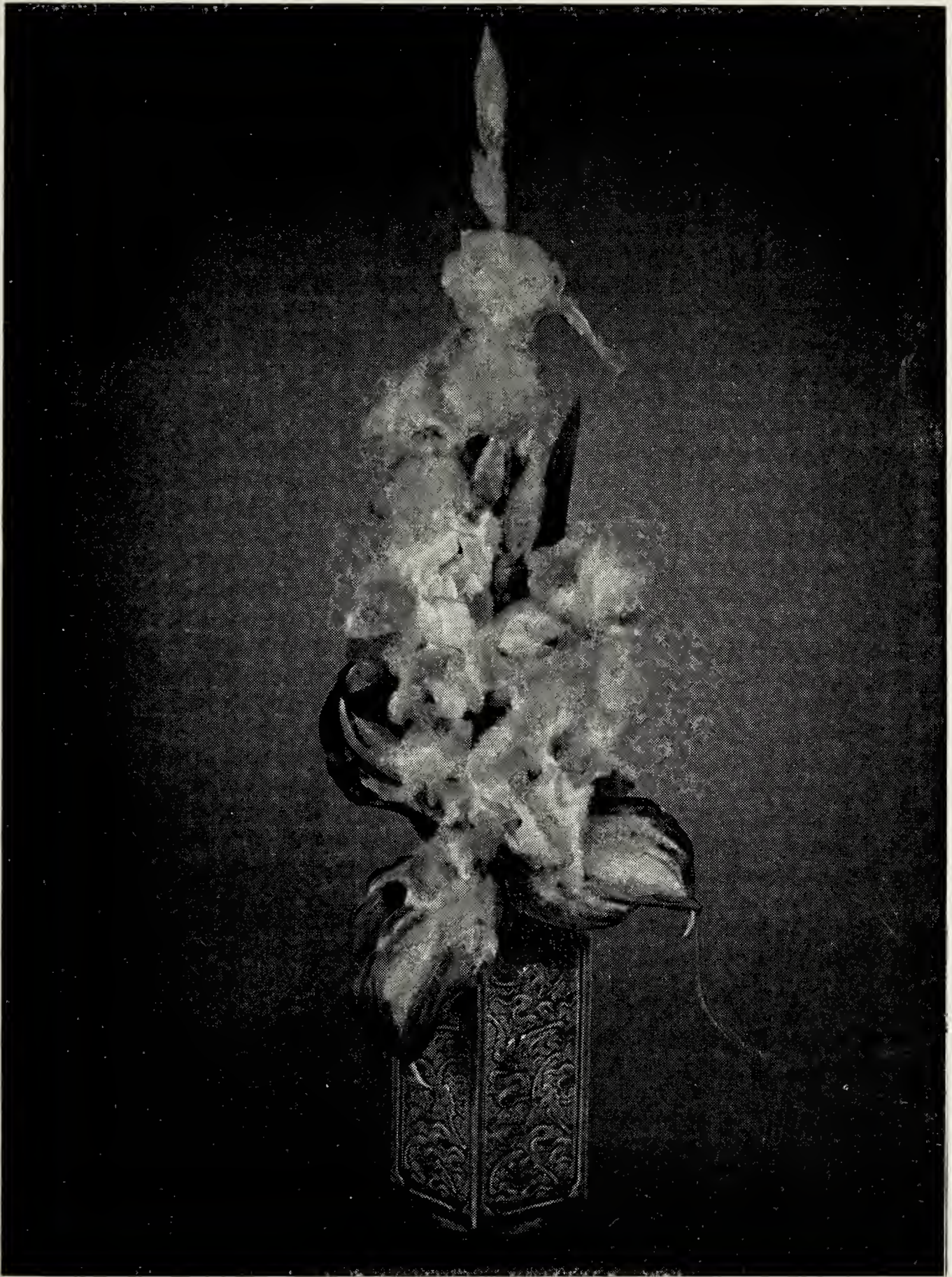
*In the Garden*

I agree with Mrs. Reynolds of Tennessee re members noting pleasing combinations of flowers with blooming times alike. May I make two small contributions. Shasta daisies bloom with Happy Days, Kalinga, True Delight, etc., and are lovely with any iris. Try Happy Days in front of a climbing Paul Scarlett rose. It is beautiful. There is one factor to take into consideration, blooming time varies with the locate, does it not?

—*Mrs. G. W. Hatzenbuehler, Jr.—Texas.*

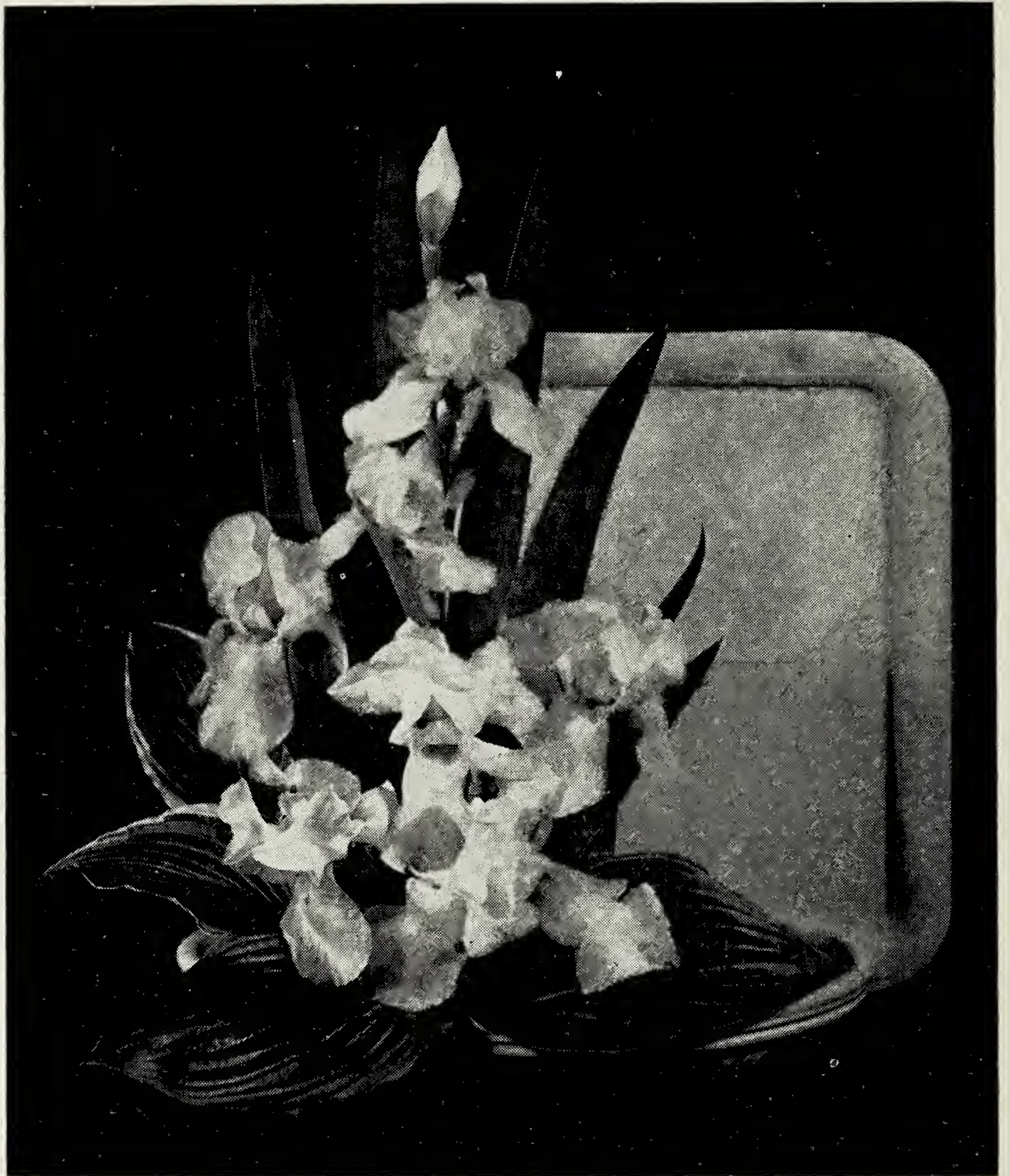
*Iris foliosa* is native from southern Louisiana to northern Indiana. It occurs in a variety of shades of blue and there is a dwarf white form also. In addition, it varies in height to such an extent that a suitable plant may be had for almost any desired location in the front of the border. *Foliosa* is very adaptable and not too hard to grow. Try planting it with early to mid-season hemerocallis. If planted against a wall or shrubbery screen, the day-lily scapes will lean outward towards the light. Remember this and give the iris plenty of room. Have you tried an iris-narcissus combination for the early spring border? The early intermediate Eleanor Roosevelt and narcissus Lady Kesteven make a stunning combination in blue purple and cream, while tulip Nardi and iris Autumn Queen were breathtaking in closely planted groups.—*G. D.—Tenn.*





*First Prize in Class One in arrangement contest went to this entry from Mrs. Maslin Davis, Roanoke Va.*





*Mrs. Maslin Davis scored another "first" with the above very lovely arrangement in Class Two*



## CONTEST IN ARRANGEMENTS

### *List of Awards and Prizes*

#### Class 1. Vertical

First Prize: Mrs. Maslin Davis, Roanoke, Va.

Second Prize: E. L. Hodson, 470 Greenfield Ave., Glen Ellyn, Ill.

Third Prize: Mrs. Frank Flucawa, New Castle, Ind.

Fourth Prize: Mrs. Arthur Nelson, 3131 58th St., Omaha, Nebr.

Fifth Prize: Mrs. A. P. Stephanson, 4724 Parker St., Omaha, Nebr.

#### Class 2. Arrangement with a Tray

First Prize: Mrs. Maslin Davis, Roanoke, Va.

Second Prize: Mrs. W. T. Wood, Merrie Mood, Macon, Ga.

Third Prize: Mrs. Arthur Nelson, Omaha, Nebr.

Fourth Prize: Mrs. A. P. Stephanson, Omaha, Nebr.

Fifth Prize: Mr. E. L. Hodson, Glen Ellyn, Ill.

#### PRIZES AWARDED

##### Class 1

##### *Iris*

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CASCADE SPLENDOR

PREMIER PEACH

VIOLET SYMPHONY

Membership A.I.S.

First Prize

Second Prize

Third Prize

Fourth Prize

Fifth Prize

##### Class 2

##### *Iris*

HELEN MCGREGOR

CHIVALRY

MASTER CHARLES

DREAMCASTLE

Membership A.I.S.

The photographs of Arrangements were judged by Mrs. Robert Kerfoot of Westchester, N. Y. Special BULLETIN Award goes to Mrs. R. I. Perry, 109 Brookside Road, Needham, Mass. Mrs. Perry's arrangement was received after the judging took place, but her entry was of such outstanding quality the BULLETIN takes pride in creating the Special Award and sending to Mrs. Perry a rhizome of Iris Barbara Adams.



*Second Prize in Class One went to Mr. E. L. Hodson, Glen Ellyn, Ill.*

*Second Prize in Class Two was awarded this entry from Mrs. W. T. Wood, Macon, Ga.*





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