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Editor, R. S. STURTEVANT

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IRIS ALBISPIRITUS

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THE AMERICAN IRIS SOCIETY

COMMENT AND REMARK

■ “I wonder if we are to branch out in many ways, if it would be well to include in the BULLETIN a column of first class beauty hints, some good cooking recipes, and some good sound advice to the lovelorn and heartsick. Someway the matter continues to remind me of the old hen that persisted in setting on the door knob. She did not know her limitations.”

And such is the reaction of at least one member to our January BULLETIN which your apparently misguided Editor had considered unusually fine. Knowing said member I immediately seek out a recipe and remind you of the extensive use of orris root in beauty preparations without number.*

The above member was one of the six who did appreciate our efforts and together they represent perhaps a 600% increase in letters of commendation (or condemnation—we like both).

Perhaps advice to the “heartsick” might be to those who grow iris commercially and seek to protect originators in maintaining for at least a year or two the introduction price. The “Marketing Agreement and Supplementary Code of Fair Competition for Nurserymen” has now been formulated and awaits approval under the NRA. It is sincerely hoped that the iris growers will gather for discussion at the Annual Meeting at Lincoln, Nebraska, in May. The “Open Price” clause of the agreement is of especial interest.

With the unusually bitter and continued cold in many sections of the country records of hardiness will be extremely valuable this spring and it is perhaps fortunate that, in following the recommendations of the Award Committee as to zoning, the new committee will have current experience well in mind.

That 95% of our varieties are hardy and perhaps 80% regular in flowering in most sections it must be remembered that many of the most beautiful start growth too early in the spring and that the buds are frozen all too frequently. We welcome reports.

THE EDITOR.

*Special Publication. Antoine Chires Co., 147 Waverley Place, N. Y. City. Report of the International Iris Conference, 1922 Also Bulletin No. 3.

BEARDED IRISES. NOTES ON PROPORTION, FORM, ETC.

F. WYNN HELLINGS

Note. Originally published in "Gardening Illustrated" and republished in the "The Iris Year Book, 1933," it seemed well worth the attention of all our members. Similar discussions of characteristics and points in irises will be found in our Bulletins 2, 6, 10, and 15. I was glad to find that Mr. Wellings uses many of the descriptive terms found on the Data Card in use by our Society in its published descriptions.—Editor.

■ The idea of the desirability, equally with the inevitability, of an ideal when considering proportion and form in connection with Irises is forced upon the honest Iris lover and student, although any attempt to impose rigid canons of perfection must be sedulously watched and thwarted. Co-existent with the recognition of the ideal must be an ungrudging acknowledgment of the existence of many manifestations of beauty in which some of the attributes of the ideal are lacking or only imperfectly achieved.

There is room for more than one type of Bearded Iris. The simple sturdy Ambassador can maintain its place equally with the elegant, graceful Aphrodite, the gently waved outline of Micheline Charraire and the highly-decorative standards of Ophelia and Lohengrin will probably have as many admirers as the classically severe outlines of Princess Beatrice, the low-growing Sapphire (Sapphid. A.I.S. name.) can keep its place in front of the tall Purissima, the crinkled beauty of Sweet Lavender will not be discarded because Anne Marie Cayeux is smooth as a baby's cheek, and the single-flowered *chamaeiris* will co-exist with the profusely-branched Homan. There cannot be, there must not be, any stereotyping of one form as the only manifestation of excellence.

The (superficial) interest of the non-gardener and the beginner is probably in colour alone, but only a single step separates the beginner from the student. The lover of the iris early begins to notice points other than colour, such as texture, substance, and branching habit, and, sooner or later, he develops into the earnest student of the flower. He finds interest in seeking the best, and, developing into a critic and an idealist, cannot fail to make his contribution to the evolution of a standard of

perfection by dissemination of his opinions, either by the oral or the written word, and eventually the aggregation of individual appreciations becomes a collective opinion which determines the ideal for the time being.

That this evolutionary process has been going on is testified by Sir Arthur Hort, who says, "Whereas a large proportion of the tall Bearded Irises which were grown a generation ago had small and rather shapeless flowers of nondescript colouring, one sees now a multitude of tall, stately plants, many of them with finely-branched stems to show off the flowers. Moreover, the individual blooms are for the most part beautifully shaped, with well-held standards and falls." That the evolutionary process is still going on was testified by such a keen observer as the late American irisarian, F. X. Schreiner, who expressed his admiration for the way in which "the English growers are championing the idea of poise, shape, branching, as highly important and finally determining factors of the value of a variety."

PROPORTION AND FORM

Proportion is concerned with the stem and its branches, and includes balance and poise (Dykes described poise as "grace of bearing"). It covers all points bearing on the relation of one part of the stem to another part and to the whole. Form is a separate characteristic and mainly concerns the individual flower, but inasmuch as it offers itself to the eye at the same time as proportion in its application to the stem, it cannot be dissociated from proportion in any study of the latter. The study of proportion and form is, however, profoundly affected when one comes to consider mass effect, which is not dependent upon the ideal in its application to the individual show spike but on (1) colour—which is a matter of personal taste, determined by the physical equipment of the observer, (2) background—trees and shrubs, contiguity of other Irises or other flowers, positional effect as regards the setting sun, etc., and (3) visibility, e.g., the emergence of the flower from the foliage of the plant. A bed of *Peau Rouge* or *Cluny* or *La Neige*, with their grossly overcrowded flower-heads, or a bed of *Isoline*, with its ugly, narrow, strap-like falls, may, in the right setting, have as good or almost as good a mass effect as a bed of *Marjorie Tinley* or *Alcazar* or *Evelyn Benson*.

The general question of the symmetry of the spike may be viewed either from the garden standpoint or as a feature of the show table. For mass planting even such an important characteristic as branching is more or less subordinated to the colour effect, but on the show table it is essential that the stalk be well and widely branched and the flowers so placed and poised that they give a balanced effect. Let us debate the ideal first as far as regards the flower set up as a specimen. The stem should not be too stout for the size of the individual flowers, or to put it in reverse, the flower should not appear small considering the thickness of the stem. When gazing at *Ambassadeur*, much as we admire that noble variety, there is always an uneasy consciousness that it is not really necessary to have such stoutness of stem to carry the flower. Again, the stem should be tall, short or medium according to (1) the height of the foliage; (2) the size of the flower; (3) its own thickness; (4) the length of its branches. Judged by this criterion, *Dominion* and some of its derivatives are too short in the stem, and the somewhat dumpy appearance of some varieties, e.g., *Kochii*, is due to the flower stems not standing clear of the foliage.

Looking at it from another aspect, the stem must be stout enough in its build and attachment to withstand wind without breaking or bending, and yet not so stout as to be deficient in grace or to incur any suspicion of coarseness. *Asia* fails lamentably in the essential of ability when full grown to carry its flower-stalk erect in all weathers. Very great care must be exercised, however, in appraising an *Iris* on this count, because a stem which is very stout may be so surrounded by bold, luxuriant foliage and carry such large flowers, that the general effect lacks nothing of the artistic; for instance, the stately magnificence of such a flower as *Député Nomblot* is probably as satisfying to the artistic eye as is the airy, fairy grace of *Aphrodite*. Another falling away from the ideal may occur if the stem is so slender that it seems almost too refined for the size of the flowers, as is the case with *B. Y. Morrison*. Secondly, the stem should be well branched, that is, have three or five, etc., branches according to its own height, and the branches should be symmetrically placed, as in *Lady Foster*, *Purissima* and *Député Nomblot*. The individual branch must not be too short so that the flowers are packed close to the stem, as in *Mystic*, nor placed too low down,

as in Moa and Mrs. Robert Emmet. A clear stem for a third or a half of the height seems to be called for to lift the flower well up from its surrounding foliage. If the branching starts too low down, aphylla-like, giving the candelabra effect so much admired in America, there is a loss of dignity and, to my eye, an utter lack of proportion. On the other hand, if the branching does not begin until near the top of the spike there will be that serious defect, a crowded, canna-like appearance of the spike. Such well-known varieties as La Neige, Peau Rouge, Lohengrin, Dejaset and Duke of York furnish examples in varying degree of this undesirable trait. The two extremes of branching are to be found in the E. H. Jenkins type, with its many and long branches, the lower of which are themselves branched again (probably *trojana* blood), and the Stanley H. White type (perhaps of *cypriana* origin), where the branching is at the top only and the flowers consequently are almost on an even plane. The only good thing to be said for the latter type is that it has value for mass planting, although it is not even the best type for that purpose.

The branches should be carried at an angle of about 45 deg., more or less, as in *trojana*, Alcazar, Lord of June, Mrs. H. F. Bowles and Cardinal, and at regular intervals, although the flower of the topmost branch may very well be comparatively close to the crown flower so as to take its place as a symmetrical apex to the spike when the crown flower goes off. A zig-zag stem (fortunately not common) is considered to be a defect in the specimen flower, although it matters little or nothing in mass planting. Examples are True Charm and Cygnet.

Before proceeding to that part of the subject which is concerned with form, we must deal with several connecting links between proportion and form. We have already seen that the size of the flower affects proportion in the stem; too large or too small a flower destroys in detail the symmetry of the spike. Several of the *pumilas* and *chamaeiris* (e.g., *cyanea*) and some of the species (e.g., *arenaria*), valuable and attractive as they are for other reasons, are deplorable from the point of view of proportion, their squat appearance deriving from the big flower on a short stem.

Symmetry and poise are affected by the angle placement of the bud and the opened flower. The bud must not point inwards

towards the stem (the Dominion tendency), as, in addition to looking symmetrical, there is frequently with flowers which do this, a break in the standard segments of the opened flower where it is cut in two by the stem, and a segment is not infrequently crushed or doubled back on itself.

Form can now be studied. No consideration of size or colour or anything other than the shape and the effect of the shape enters into the question.

Close observers have set up a classification of eight differing forms of the standard, but this is perhaps too meticulous, and the eight (flat, over-lapping, arching-cupped, conic-arched, cupped erect, tips adpressed, floppy, domed, over-arched), may conveniently be reduced to five, viz.: (1) flat, (2) arched or domed, (3) arched open, (4) floppy, (5) adpressed. The flat type, which is that of the *Kaempferi* varieties, may be ignored in a study of the Bearded Irises, except for a passing reference to the intrusion of that undesirable alien, Clematis. The floppy type is, of course, frankly deplorable. Not only is it ungraceful in appearance, but the floppiness indicates a lack of the substance which enables a flower not only to stand up and rejoice in the burning rays of the sun but to emerge triumphantly after rain. Alas, that Lord of June, that regal beauty, should be the striking example of floppiness! Another bad standard is the arched open type in which the segments do not meet but fall away from one another and present an appearance as of clutching claws. In a way this type is worse than the floppy type, because there are days in the youth of a floppy Iris when it may be acceptable, but the splaying, open-cupped standard is always and everywhere unpleasing to the eye. It must, however, be noted that so competent a judge as Bliss found a compensation in the open cupped standard when it displays better such a beautiful feature as the veinings to be found in Merlin, and all of us have doubtless appreciated the glorious colouring in the heart of Lent A. Williamson when it throws itself open in its abandoned way. All of which rams home the useful lesson that we must not put a beautiful Iris altogether outside the pale because of its failure in one respect to reach an academic ideal.

As regards the adpressed type (e.g., Ophelia), there is no fault of line which condemns it, although it may not appeal to every eye. Perhaps this is because there is something pinched and tight-

lipped about its appearance. It is not the generous, open-handed fellow among Irises! It speaks of miserliness and a grudging spirit, and is evidently going to "keep itself to itself."

In the arching or domed (either just meeting or slightly overlapping) we find our ideal, both from the artistic and the practical standpoint. The segments are broad and, as a rule, so solid that they maintain their erect position throughout the life of the flower. As a rule there is no lack of substance in Irises of this type, and we have the satisfaction of knowing when we look at such a flower in the glory of its first day that we are going to look at it again tomorrow and the day after.

Another point is that the standards must not be too big in proportion to the falls. Lord of June sins in this respect.

When we proceed to a critical study of the falls, we are confronted again with the difficulty of placing certain types under a ban because their falls fail to comply with the demands of symmetry. This difficulty concerns the angle at which the falls stand in relation to the axis of the flower, and it may perhaps at the outset seem that we are debarred so far as regards the falls from setting up any standard of perfection at all.

Some varieties (comparatively few) hold their falls practically horizontally, that is, at right angles to the axis of the flower, e.g., Col. Candelot, Docteur Chobaut, Santa Barbara and Frieda Mohr, some have their falls hanging straight down, e.g., W. R. Dykes and Mount Penn, while others extend them at varying angles between these two extremes. A sub-division of the straight-hanging class includes those varieties like Isoline, whose falls have their tips curving inwards towards the stem. At first there was no discrimination between these types of falls but individual preferences and artistic sensibilities came into play and eventually criticism became vocal. The straight-hanging fall is now condemned by the majority, and the flaring type is becoming established as the ideal. But in this instance practice cannot keep pace with theory. There are so many deservedly popular Irises which have the straight-hanging fall that that form cannot be ruthlessly put on one side, and, moreover, even if raisers have always in mind in future the desideratum of flaring falls, it is not to be expected, nor is it desirable, that they will refrain from introducing a new variety which fails in this respect but has other desirable characteristics. There is also another consideration

which will be a factor in perpetuating the existence of the straight-hanging fall, and that is its value in mass planting, where the colour effect is immensely increased by the open view of the fall presented at right-angles to the eye. It is, I think, obvious that the canon of perfection which demands flaring falls will never succeed in altogether banishing the straight-hanging fall.

The next point demanding study is the shape and proportion of the falls. The following shapes have been distinguished and named:—obcordate, cuneiform, spatulate, oblong, obovate, ovate, fiddle-shaped and circular. The most desirable forms are the obcordate and the obovate; the broad, more or less wedge-shaped segments are symmetrical and display the colouring to the best advantage. Examples of these good types are Peerless, Micheline Charraire, Mlle. Schwartz, Vert Galant and Souv. de Mme. Gaudichau.

Then again the falls must not be pinched (have a waist) as though malicious fingers had deliberately constricted them. Magnifica, Mme. Chereau and Louis Bel are examples of Irises which sin more or less in this respect. This fault is easily and quickly appreciated even by the tyro, and I cannot imagine anyone failing to acknowledge the inferiority of the pinched, strap-like fall as compared with the broad, flat fall. A cognate fault is the pointing-in of the tips of a straight-hanging fall towards the stalk, already referred to.

It is not necessary to dilate upon the forms intermediate between the good and the bad forms which have been referred to in these notes. Insofar as they approach or depart from the ideal, they will take their appropriate places in the estimation of the Iris student and with the rapid increase in the number of hybridisers at work on the Iris, and the greater daring displayed in making crosses, it is to be expected that substantial modifications of existing types may arise which, in their turn, will be weighed in the balance and assigned their niches in the Iris world. If raisers will always have in mind definite principles relating, *inter alia*, to proportion and form and set themselves to work to a high standard there will be fewer unworthy flowers introduced. It should always be borne in mind that, as Pasteur said, "Chance favours only the mind which is informed."

SUBSTANCE, TEXTURE AND SURFACE

It is very regrettable that writers on Irises and compilers of catalogues use the terms Substance and Texture indiscriminate-

ly. The words are not synonymous. Substance refers to the corpus of the material of which a thing is composed. Texture is not concerned with the mass of the material but with the disposition of its threads or fibres and the resultant grain and surface. It is so obviously convenient and proper to maintain the distinction between the two terms that I may be forgiven my earnestness in appealing for a scrupulous care in choosing the right word. Surely it is not difficult! DeMaupassant said "the literary pilgrim must seek the right words with fasting and prayer," but here the right words are ready and so clearly defined that they should be used discriminately on their lawful occasions. To talk of velvety substance or thick texture, as is frequently done, is absurd, and these errors reach their climax in the statement by one catalogue-maker that a certain variety "has no texture at all!"

Now, to give a thought to substance. We say that a flower has substance when its petals are thick and stout, connoting long-lasting flowers with erect standard segments, resistant to wet and to a torrid sun. Some observers aver that the deeper the colour the better the substance, but I am not yet convinced that this can be accepted as a rule. Although, perhaps, a goodly number of examples can be adduced in support of the theory it cannot, at all events, apply when the flowers are white—think of the splendid substance of the petals of *La Neige*! Nor does it apply to the species *juncea*, with its deep yellow colour and its flimsy petals. I am tempted to speculate from another point of view and ask whether it would not be more accurate to say that, excluding white forms, stout substance gives a better colour by adding depth, although, of course, there are exquisitely lovely flowers of quite diaphanous substance. It is not unusual to hear the remark "What a fine, solid-looking colour!" Moreover, I can imagine that, without good substance in the petal, a colour might be lifeless. What dejected-looking flower *Tenebrae* would be if its petals were flimsy instead of thick!

Some instances of stout substance, in addition to *La Neige* and *Tenebrae*, are *Ambassadeur*, *Evadne*, *Dominion*, *Dariel*, *Blenheim*, *Theseus*, *Grace Sturtevant*, *Mystic* and *Cardinal*. They remind me of Roses like *Hugh Dickson*, where the petal is so thick and stout that it tears rather than submit to the fingers of the rose-dressing showman.

The petals of some varieties have been described as leathery,

but it is doubtful whether this particular adjective can be correctly applied to any Iris petal whatever, although I must acknowledge that the beardless *I. Monnieri* comes very near it. Mr. Franklin B. Mead says that Caroline E. Stringer has "a texture of kid," so that apparently the notion of leatheriness (even if a soft leatheriness) does jump to the mind of some close observers.

Defective substance may consist in material that is either too thin or too loosely woven. Oriflamme and Edouard Michel are examples of the former, and Halfdan, with its blotting-paper petals, of the latter. There is, fortunately, a compensating feature when bringing up for judgment those Irises which are defective in substance, for there is a translucent loveliness about some of them which evokes a gasp of admiration when the young flower flaunts its beauty on a perfect, sunny day. These irises are seen at their best when the setting sun, with its low angle of light, reveals the uttermost depths of colour, intensifying especially the red pigment tones. Despite this, we must admit that, all things considered, it is better to have the petal of thick substance which refracts light instead of absorbing it.

Turning to Texture, the most popular type is certainly the velvety surface. The eye of the beholder responds instantly to velvetiness with its sensuous implications of richness and luxury. There were not many velvet-petalled Irises before Dominion came, but now there is a considerable number, e.g., 'Souvenir de Mme. Gaudichau, Mrs. Valérie West, Blenheim, Louis Bel, Grace Sturtevant, Mount Royal, Melchior.

A satiny surface also makes a strong appeal to the eye, although not so imperially assertive as the velvety surface, and it can never be passed by without a tribute of admiration. It has a quality of fastidiousness which the more comfortable velvety flower has not—the one is a French aristocrat of the *ancien régime*, the other is a wealthy Dutch burgher. Conspicuous among these satiny flowers are Harmony, Gold Imperial, Princess Beatrice and Yeoman. There is also a surface, as in *Kochii* and Mme. Henri Cayeux, which is hardly satiny as Harmony is satiny, but has been aptly described as of watered silk. Familiarity does not dull the appreciation of this quality; the gardener's eye inevitably dwells upon it in passing, however familiar it may be.

Perhaps the most glorious and entrancing surface quality is the golden sheen of Queen Caterina and a few others. It floats be-

tween our eyes and the foundation colour of the flower as a celestial film on the bridal robe. Tintallion and Zwanenberg have it in a greater or less degree, but Queen Caterina is, to me, the supreme example of this crowning glory. This silvery sheen of Isoline and Mother of Pearl and Wild Rose is charming, but Queen Caterina is something to worship as Linnaeus worshipped the golden gorse. One thinks of Flecker's exquisite phrase, "gold dusty with tumbling amidst the stars."

It is interesting and provocative to read that, according to an American writer, a new Iris, Hermitage (old rose blend), has "the bloom of ripening grapes upon its falls," but judgment on this must be suspended until the flower is seen in this country.

FRILLING, RUFFLING AND WAVING

As with many other points of distinction it has to be acknowledged right away that it is only a matter of individual taste whether the smooth, unruffled petal is preferred to the wavy or frilled. In the pallidas, Princess Beatrice, Odoratissima, Monte Brione, etc., some are heavily frilled, some are plain and smooth, and each has its admirers. Personally, the smooth-petalled flower has my vote and while reflecting on it I recall the smoothness of *Hoogiana*, a very aristocrat among Irises, or, as Dykes put it, an Iris of "a curiously well-bred and refined appearance." Without in any way intending to derogate from its beauty, I cannot help recalling the "immaculately-dressed" and "well-groomed" heroes of Ouida and other lady novelists. Examples of ruffled flowers are Susan Bliss, Damozel, Dimity and René Denis. There are a few varieties in which the ruffling seems to be an integral and satisfactory feature of their attractiveness, as, for instance, that lovely flower Sweet Lavender. Nor does the tendency to ruffling which is seen in Prince Charming and Lohengrin detract from their beauty. And here I must take myself to task for a possibly hypercritical attitude—there is a beauty of the smooth petal and a beauty of the ruffled petal (so that the ruffling be not excessive), and the two can co-exist.

A slight waving of undulation of the edge does not detract from the beauty of the petal or from the appearance of breeding. Micheline Charraire has this undulating edge but it is probably unnoticed except by a few. The same leniency of criticism cannot, however, be expected as regards a fluted or ribbed petal,

such as is seen in Frieda Mohr. Most people will notice this at once as an unpleasing characteristic, the ribbing giving the effect of the flower having been unskilfully packed and crushed in the post. Another variation is found in the fimbriated edge, e.g., Col. Candelot. Well, I am not so stricken with horror at the sight of a fimbriated edge as are the Carnation purists, but the form must, I think, be set down as inferior.

None of these variants upon the smooth-surfaced and smooth-edged form makes any difference to the border and mass effect, which, after all, interests the majority of gardeners more than a question of the perfect form viewed under the microscope of the Iris student, but this must not be taken as a condemnation of the student, who may at one moment be frowning at an aberration on an imperfection and a second later gloating over the intrinsic beauty of the flower. The student, no less than the average gardener, doubtless feels, as Countess Senni puts it, that “after all the *raison d’être*, and the primary duty of an Iris is to furnish colour, and only secondarily to make a perfectly-proportioned picture in doing so,” but the student’s is the deeper enjoyment because of his appreciation of the finer points which are unnoticed by the man in the street.

VEINS AND RETICULATIONS

It must be premised that any criticisms or strictures under this head do not apply to the beautiful, characteristic veining of the oncocyclis, regelia and regelio-cyclis Irises, but there are Bearded Irises where heavy and inharmonious veining or reticulation definitely spoils the flower, especially if the markings are on a light, cold ground-colour. Some maintain that a reticulated haft makes for distinction and gives added colour, and there are some varieties of which this is true, but there are certain flowers, e.g., Monsignor, Troost and Mme. Boulet, where the markings, being very coarse, ruin the colour effect. In San Francisco and Los Angeles the delicate markings harmonize admirably and the faint veinings of *Monnieri* (a beardless Iris) do not in any way detract from its great beauty and value. The white and bronze reticulations on the haft of Queen Caterina are soft and charming against the pale lavender of its colour. Distance has an ameliorating influence on coarse markings because they merge in the general colour effect—Miss Sturtevant remarks that the haft reticulation of Susan Bliss is displeasing, but that from a

distance the effect is a true, soft pink—and the deeper purple markings of Her Majesty are such that that variety is officially classified as self. Incidentally, it must be noted that in some cases, e.g., Mrs. Valérie West, the veining does not show up conspicuously until the flower ages. The two schools of opinion on this point are interestingly exemplified in the case of *Glowing Embers*, in regard to which Mr. Franklin B. Meade says: “The reticulation of *Glowing Embers* greatly enhances the beauty of the flower,” while another American critic emphatically declares that “on account of its reticulations this *Iris* should never have been named and introduced.”

There is not much to be said about the dotted (sanded) varieties, except that they are not generally popular. Perhaps this is because the sanding appears to be somewhat of a triviality. It is almost as though a schoolboy, having completed his chaste and simple original design, proceeds in a dissatisfied spirit to embellish it with such idea of ornamentation as occurs to him. Naturally, there are some of these varieties which approach nearer than others to one’s idea of beauty, and of these Mme. Chobaut, Jean Chevreau and Nicolas Poussin may be instanced.

And so these very incomplete notes end for the present. I put forward my opinions diffidently and I have endeavoured not to be dogmatic or didactic but simply to put into words some of the thoughts which have occurred to me in gardens and at shows, feeling that the time may have come for a crystallization of the floating ideas as to form, poise, branching, texture, etc. Discussion is good, and my best excuse for the criticisms in which I have indulged is probably that most people like to read other people’s opinions on their favourite varieties. When they find one of their pets lauded they feel a glow of satisfaction at the justification of their preference. If one is adversely criticised, or ignored, they are indignant and perhaps rush into print to present the other side of the argument. In either case they have been stirred up and the critic, though perhaps smitten by a giant hand, may congratulate himself on having applied the health-giving stimulus.

So, if your interest has been aroused, or, having been previously aroused, has been deepened, plant more *Irises* and let them greet you with the early sunrise, enthrall you during the sun and shower of the day and thrill you with their enhanced glory when the westering sun shines through their rainbow petals.

IRISES IN IOWA

MRS. C. G. WHITING

■ Starting fifteen years ago with a dozen good varieties of Iris, we were contented for a few years with the interesting color combinations they made with the other spring flowers in the border; but seeing new kinds in the gardens of our friends, we added a few each year, planting always for color harmony. Now with nearly six hundred varieties and species, we might be called collectors; but we aren't really, because we grow Iris for its garden beauty, not for pride of possession. Gradually Iris has dominated all the borders, taken complete possession of the vegetable garden, and overrun all the available adjoining property. New varieties are planted in trial beds and not used in the garden scheme till the stock has increased enough to make a good showing of color, and effective locations are found for them.

The stage is carefully set, and against a back drop of soft green shrubbery, the chorus of tall fair beauties, emphasizes the individual parts played by the principal actors. Sometimes the chorus, at least in general effect, steals the show. The fascinating new blends are shown very effectively as a point of interest before a large planting of selfs in light harmonizing shades. Talisman is more glowing against a back-ground of soft blue, and Elsinore seems to have borrowed its delicate lilac flush from a nearby planting of Thais. Midgard is lovely planted by Gabriel or Mary Barnett. Clear colors are the more clear for contrast, as a group of Sensation and Pluie d'Or in front of Snow White shows, and the purity of San Francisco is accentuated by grouping with Surprise and Mrs. Marion Cran.

Many of the shrubs flower early and echo the shades of the Iris, or make a pleasing contrast. Blue, pink, and white lilacs, *Kolkwitzia*, and *Viburnum Carlesi* suggest beautiful combinations. Shades of Blue Iris are enhanced by *Rosa Hugonis*, and even the difficult variegatas are more pleasing when given a drop curtain of *Philadelphus aurea*. Before a mass of white spirea or *Philadelphus Virginal*, tall dark blues like Blue Velvet or Black Wings make a perfect setting for Purissima or Venus de Milo.

That we have found room for many of the fine new varieties, does not mean that we think they displace the old favorites. The tall slow types are not always the most comfortable in the garden,

and many a visitor turns his back on some proud prize winner to look wistfully at a long stretch of Susan Bliss, Chartier, or Hus-sard. They seem to fit their surroundings so perfectly, and never look self conscious.

Given good drainage and plenty of sunshine, nearly all types of bearded Iris seem to thrive in Iowa. Borers are unknown, and root rot bothers only occasionally, where drainage is not right. We use no fertilizer except where the soil has been constantly used for years, and then only bone meal. Established plantings need no protection in winter, but newly set roots should be covered with wild hay or leaves to prevent heaving. Even California Iris are hardy here if given a light covering of wild hay and perhaps the added protection of a box covered with water-proof building paper. This keeps out excess moisture and prevents the plants from starting too early in the spring. Purissima, Santa Barbara and San Francisco have been wintered this way here for several years, and they behave very much as if they liked it, producing perfect spikes. Mme. Durrand and Candlelight bloom freely and increase well. Desert Dawn is a good companion for Rameses and grows almost as sturdily in our garden. Blue predominates in Desert Dawn as rose in Rameses, and each is a good foil for the other. Endless color possibilities make Iris gardening a rare game.

I feel as Mrs. McKinney does, that Bearded Iris are not suitable for planting near pools, even when a well drained location is given. They just do not belong. The slender leaved *sibiricas* and *kaempferi* are more in harmony. A large planting of Japs bloom well at the lower end of our pool, where the overflow may be diverted at blooming time. Starting with good named varieties we have allowed seedlings to develop, but pull out those not clear in color. Myosotis carpets the damp soil, and nearly covers the wide stone path. Along the edge of the pool light blue and white *sibiricas* make a lovely picture, Blue Charm the finest one. On a slope near by, where it can sprawl is Dorothea K. Williamson, among pale yellow columbine. Along a shady, mossy watercourse, *Iris cristata* thrives among maiden hair ferns; and yellow lady-slippers nod farther back in deeper shade.

Mrs. Wright says every garden should have a motto, and ours is carved on the back of an old cypress lawn seat:

“Who loves a garden
Still his Eden keeps”

H. M., A. M., D. M.

(The recommendation of the Committee on Awards that a variety be observed for five years before the Award of the Dykes Medal, was approved by the Directors December 9, 1933.—ED.)

■ The letters in the caption are not abbreviated swear words, although profanity has been known to result from their application. We are not concerned with their ethical significance. Neither do we question the right of duly constituted authority to bestow them on suitable subjects.

There have been times, however, when the Committee on Awards have seemed to be in too great haste to exercise their prerogatives and for this reason their decisions have sometimes been questioned in spite of the fact that the recipients were probably worthy. I refer particularly to the award of the Dykes' Medal.

How well should a variety be known in order to be eligible to the honor? Should we be governed by time regulations which are applicable to a relatively small country like England but which may not be applicable to this country? England can be inscribed in a circle of about 150 miles radius and is somewhat smaller than the state of Illinois in area.

It would seem reasonable to assume that the distribution of the variety rather than the "elapsed time since introduction" should be a governing condition of eligibility.

Few of our judges or dealers have either the time or money (especially during the past two years) to travel several hundred miles to score or see new varieties. It is somewhat of a gamble to purchase new varieties even when they have received an H. M. at a distant place. Unless the good new varieties are sent to dealers and (or) selected gardeners on *trial*, the distribution may be slow.

Destructive criticism should be accompanied with constructive suggestions; hence I suggest that until the same number of accredited judges, say three, have rated a variety in each horticultural district and their ratings have been filed with the appropriate custodian, the award should not be made. Furthermore, the ratings should not, in general, be made on the blooms of one year plants.

Another method would be to rate new varieties only in centrally located test gardens in horticultural districts. A part of this scheme has been tried with indifferent success and is probably not feasible on account of the cost.

DIGBY LEGARD.

POLLEN TUBE BEHAVIOR IN IRIS

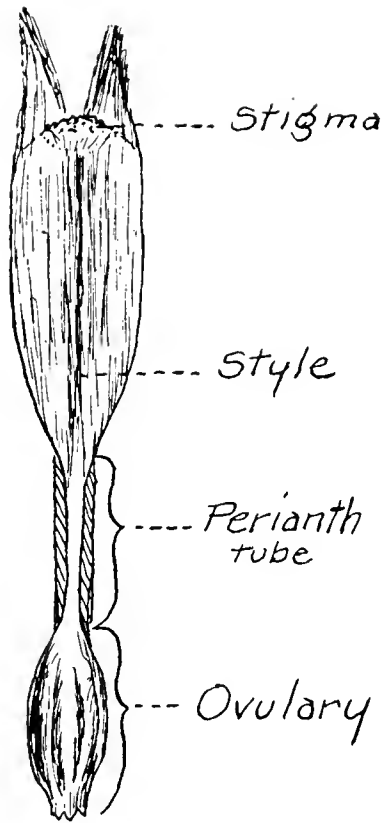
BY WILLIS E. CHASE

It is a well-known fact that some varieties of Iris are pollinated much more readily than others and that in some varieties, even after artificial pollination, seed does not develop, due no doubt to the lack of fertilization. Whether lack of fertilization is due to inability of the pollen to germinate; to some obstruction to pollen tube growth; to too much competition among pollen tubes or some other reason is not definitely known.

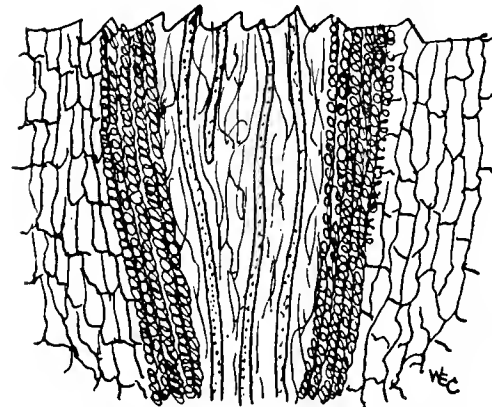
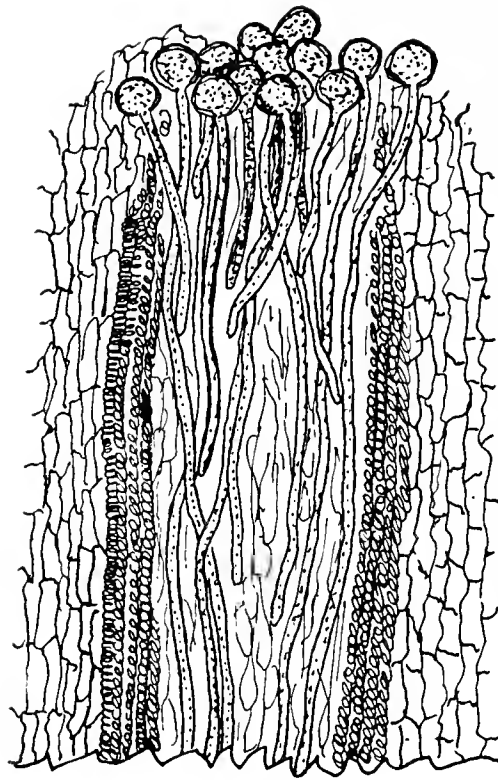
It was suggested to the writer that he make a study of the pollen tube growth in Iris to determine, if possible, the percentage of pollen tube germination, rapidity of pollen tube growth, course of the pollen tubes through the style, a simple method of demonstrating pollen tubes in the style, presence of nuclei in pollen tubes and any other information obtainable. This study was suggested by Dr. A. E. Waller, Professor of Botany at The Ohio State University, and it was the privilege of the writer to be under his direction throughout the study.

White Irises which produced an abundance of pollen were selected for experimentation. White was selected because of the lack of pigment which otherwise might render the pollen tubes obscure from vision under the microscope. This particular plant was also used in the experiments because it was found to be easily pollinated.

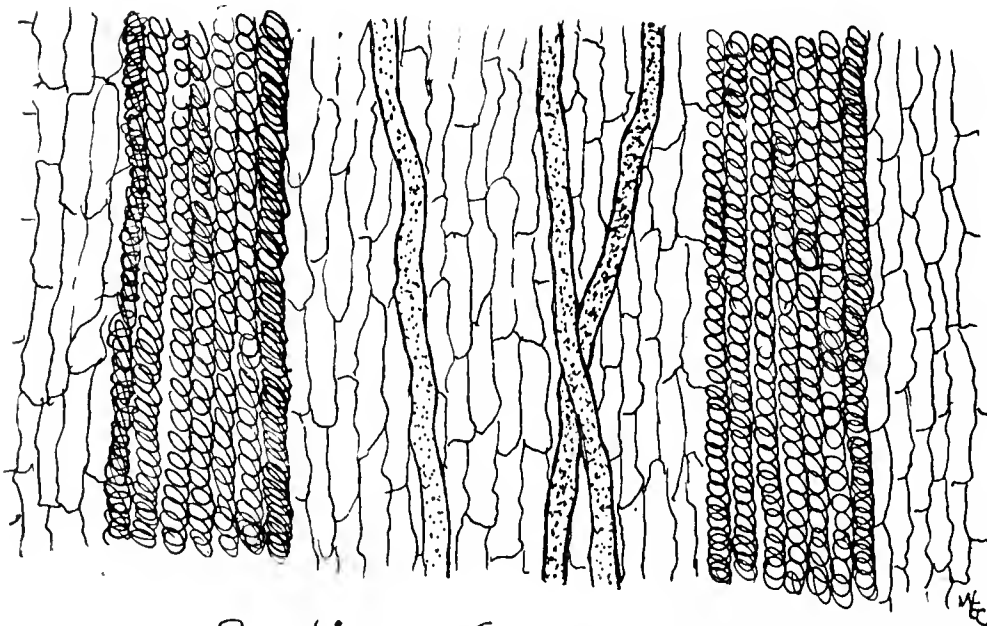
Several flowers were self-pollinated by removing from each an anther heavily laden with pollen and rubbing the pollen upon the stigmas of the flower from which the anther was taken. The plants were pollinated at 10 A. M. and left in the garden under natural conditions. At 8 P. M. of the same day, the complete stigmas and styles from one flower were removed and the epidermis carefully peeled from the upper side of each style with the aid of a sharp razor. Each was next mounted in water on a microscope slide and examined with the medium power of the microscope (16 mm. objective). Approximately 90 per cent of the pollen grains present upon the stigmas had germinated and grown down to varying distances into the styles while a few had



Pistil of Iris
(Natural Size)
Figure 1.



Germination & Growth of
Pollen tubes through
Style.
(Approx. 100X)
Figure 2.



Section of Style from
Perianth tube with pollen tubes. Figure 3.
(Approx. 200X)

reached the perianth tube (Figure 2). Growth of the pollen tubes took place very rapidly after germination, as indicated by the fact that a few of the tubes had reached the perianth tube within 10 hours. The average distance between the stigma and perianth tube was 30 mm. (Figure 1). The course of pollen tube growth through the style to the perianth tube could be easily traced since the tubes themselves were somewhat darker than the surrounding tissue cells. After the pollen tubes had reached the perianth tube, however, a different technique was required in order to clearly distinguish the course of the pollen tube through the perianth.

After sufficient time was allowed for the pollen tubes to grow down through the perianth tube, a few complete flowers were removed. The perianth tube and ovulary of one were cut into thin longitudinal sections with a sharp razor blade and mounted in glycerin upon a microscope slide. Examination with the microscope revealed nothing. This method proved a failure since this process was repeated with additional flowers with no satisfactory results.

An eosin-glycerin preparation was used on longitudinal sections with the purpose of staining the pollen tubes but instead the surrounding tissues became stained, making it even more difficult to distinguish pollen tubes if they were present.

Good results were finally obtained by first boiling the complete pistil in water for 2 minutes to soften the tissues. It was then transferred to a 75% formalin solution where it remained for 1 hour. As much as possible of the outer part of the perianth tube was then removed and the whole placed in a strong solution of anilin blue for one-half hour. The strength of the stain determines the length of time that the object to be stained should remain in the solution. The pistil was next removed, dipped in water to remove excess stain and placed in 25% lactic acid for one-half hour to clarify the tissues. It was then transferred to a slide and flattened as thin as possible by pressure applied to the top of another slide placed above. Upon examination, the pollen tubes could be easily seen down as far as the ovulary (Figure 3). At the ends of some of the tubes nuclei could be seen. Basic fuchsin was also used as a stain in place of anilin blue with fairly good results. This was as far as the

writer was able to trace the growth of pollen tubes by means of these simple methods.

It was observed that the tubes followed the vascular system in the style from the stigma to the ovulary. They were repeatedly observed growing between the vascular strands (Figures 2 and 3). This might be due to a possibly greater supply of food material for pollen tube growth along the vascular system.

Another experiment was performed to determine more accurately the rate of pollen tube growth. Immediately after pollination, several complete flowers were removed by cutting them off just above the ovulary. The cuts were made with a sharp razor blade under water. The cut ends were immediately placed in a bottle filled with water. These cut ends were observed from time to time with the microscope and, after approximately 20 hours, the end of pollen tubes could be seen projecting out beyond the perianth.

It was estimated in this *Iris* that it takes approximately 20 hours for the pollen tube to reach the ovulary after pollination when conditions are favorable.

SEED SOWING

ROY W. GOTTSCHALL

■ **When To Plant.**—For a number of years I have planted tall-bearded iris seeds in the late summer and early autumn, but having various degrees of success, thought it would be a rather interesting experiment to use several ounces of “field run” seed in an experiment: the objective being to find out just when the seed should be planted.

Seeds were harvested from August 6th to September 15th. The first batch collected were from hand crosses and planted August 11th after thoroughly drying out. Some few of these seeds sprouted in 72 days and were out of the ground on October 22nd. A few of these seeds were held before planting as much as 17 days. The seedlings came through the ground in great numbers from April 16th to the 22nd, taking practically 253 days to sprout. The fall sprouting is not desirable in outdoor field planting in central Ohio on account of the great number of freezings

and thawings throughout the winter and so the August 15th planting was just a little early.

From September 25th to February 12th, inclusive, plantings of a known number of seeds that sank in water (therefore matured) were made every 14 days, in parallel rows, with like soil conditions, etc.

There could be two ways to consider the results: percentage that actually did sprout in the spring of those planted, or taking No. 1 batch as a basis for computing the percentage of sprouting of the other batches. In other words, being from a collection of seeds that were very well mixed, the per cent of fertility throughout was practically the same. Some were not fertile even though they sank in water. The first batch started coming through the ground on April 1st and by May 10th, 48 per cent of those planted had sprouted. The rest held over until the next year or were no good. If 48 per cent of the first planting in the test came up, then it could be assumed that 48 per cent of all the later plantings would have also come up, except that they were not planted until later dates. The time the seeds were kept out of the ground was the only variable.

From the table given it will readily be noticed how serious it is not to plant tall bearded iris seeds within ten days after harvesting. Only 2 out of every 100 seeds sprouted the first spring when not planted until January 30th—46 out of that hundred had decided to lose their vitality or wait another year to sprout.

Test Planting	Planted	Days to April 21	Age of Seed	Per Cent of Total Sprouting	Per Cent of Good Seed Sprouting
1	Sept. 25	208	32	48%	100%
2	Oct. 9	194	46	36%	80%
3	Oct. 23	180	60	25%	52%
4	Nov. 6	166	74	14%	30%
5	Nov. 20	152	88	13%	29%
6	Dec. 4	138	102	11%	23%
7	Dec. 18	124	116	8%	18%
8	Jan. 1	110	130	6%	13%
9	Jan. 15	96	144	4%	9%
10	Jan. 30	81	158	2%	4%
11	Feb. 12	68	172	1%	2%

Iris Seed Sprout in Peat.—Having some seeds of tall bearded iris on hand on January 1 it seemed worth while to see if they would sprout in damp peat. A deep 6-inch earthenware pot was soaked and filled to within two inches of the top with peat that had been wet thoroughly in a bucket and then pressed out by hand.

A number of seeds were placed on the peat and then covered with an inch of fluffy peat from the same bucket, and then the peat pressed down a bit. The pot was covered with window pane glass and placed in the cellar where the temperature runs rather steady at 54 degrees.

At the end of 81 days the first sprout appeared and they continued to come up until the 106th day. That was the third week in April, and after hardening off the pot in a cold frame the seedlings were easily transferred to the field, the first week in May.

While in the basement the peat was watered at intervals with an ordinary sprinkling can in order to keep the peat fairly damp, although the glass covering protects it from any sudden evaporation and the extra watering may not be necessary.

Sprouting Dwarf Irises.—Dwarf iris seeds seem to keep their sprouting vitality over a much longer period out of the ground to sprout the first year. Planted as late as January 7 in the midst of an Ohio winter, they were up and out of the ground with their seedling fans by April 29. An early transplanting will guarantee bloom the next year.

EDIBLE IRISES

■ The few records assembled in “Sturtevant’s Edible Plants”^{*} suggest that only among primitive peoples and in times of dire distress do irises become an article of diet. *L. ensata*, *japonica*, *setosa*, *sibirica*, and *tectorum* were all used and also cultivated as a source of starch in Japan. One can imagine the slow grinding of mortar and pestle, the probably frequent rinsing, the whole laborious process of extracting one valuable element from the mass of tissue.

“The hunters of Virginia use *I. cristata* very frequently to alleviate thirst. The root, when chewed, at first occasions a pleasant sweet taste, which, in a few minutes, turns to a burning sensation by far more pungent than capsicum.” So was it reported in 1814 by an F. Pursh.

Gerarde (1597) calls *I. sisyrinchium* “Spanish Nut” and says it is “eaten at the tables of rich and delicious persons in sallads or otherwise.” This is our one suggestion of the use of iris in a salad but in these days of a renewed interest in herbs one wonders whether buds or flowers would not tempt. Perhaps a cushion of cream cheese studded with small buds of Siberian irises, their color just showing purple would attract or the fatter buds of the bearded might be boiled for a minute or two and served on crisp rounds of toast as a variant on asparagus. I suspect, however, an underlying bitterness which would find itself more at home on an *hors d’oeuvres*.

I. pseudacorus with its angular seeds is said to form a good substitute for coffee IF wellroasted. This was an 1862 report and one wonders whether, as more recent, it might be more reliable.

We must now leave iris proper and consider *Moraea edulis*, a South African representative of the family. “The bulbous root is eaten by the Hottentots. (I have always considered the euphony of the name appropriate to Alice in Wonderland or The Wizard of Oz.) When cooked it has the taste of potatoes. Thunberg

^{*}Edited by U. P. Hedrick. The 27th Annual Report—Vol. 2—Part II, New York Agricultural Experiment Station.

says, in Kaffraria, the roots were eaten roasted, boiled, or stewed with milk and appeared to him to be both palatable and nourishing.”

I think to fulfill the expectations of my critical correspondent I must include also records of *Hemerocallis*. Their flowers are taken home and dried or pickled in salt by the Aino women in Japan and then used in soup while those of the variety *minor* in China are used as a relish with meat. The young leaves, however, “appear to intoxicate or stimulate to some extent.”

Among others of the Iridaceae, *Babiana* may be boiled and *Gladiolus edulis* tastes like a chestnut when roasted; *sparaxis* is also edible and one is rather amazed that the bulbous irises are not recorded as edible.

All in all our favorites may offer few opportunities for eating but, on the other hand, there is no indication in root, leaf, or flower of a real poison however displeasing they may prove to the palate.

It would be most interesting if any member might possess a personal record of such experiments. One wonders whether Queen Caterina would prove more palatable than Pluie-d’Or, Tid-bit than Sea Foam.

R. S. S.

VIRGINIA NOTES. 1933

MRS. W. W. GIBBS

■ On April 22nd our first Bearded Irises bloomed. From then until June 4th the garden was a riot of color from these magnificent flowers, to say nothing of the early dwarf varieties in the rock garden and later joy from the Siberian, Dutch, English, and Japanese.

ZWANENBERG, one of the first, its unusual coloring attracting immediate attention.

PRIMAVERA, though the stems are far too short for its lovely large yellow blooms, it is early and I like it.

LOS ANGELES, a splendid, tall, stately white with blue edging, similar to

SAN FRANCISCO, a gigantic flower of white, edged with a "stitching" of lavender; well-branched.

WILLIAM MOHR, a Pogocyclus hybrid with individualism in form, texture and marking but not a free-bloomer with me.

KING MIDAS. Such an unusual new color of golden buff and garnet brown.

DOLLY MADISON with her perfect form and wonderfully blended dress is high in the ranks of irisdom.

PURISSIMA, the perfect white iris. It is exquisite, reminding one of spun glass when it bursts forth in all its glory.

PINK SATIN. Slow to multiply and slow to bloom but patience is rewarded.

WILLIAM R. DYKES, the largest yellow introduced to date, and what a glorious sight it is.

GRACE STURTEVANT, a wonderful dark red-brown with thick velvet falls of violet-carmine.

INDIAN, a coppery blend that is so aptly named. Plant these last three in a group, if you want a combination that is rare and alluring. Place Indian a little in the foreground as it is not so tall. Then, when they bloom, arrange them in a copper or brass container and you will win a prize at any show.

CLARA NOYES, the loveliest thing in my garden. It is gorgeous, indescribable, with its gold, rose and bronze like a Talisman rose. I am thrilled with its beauty though it stands only about 2 feet

near the front of my border. I found myself again and again retracing my steps to this one clump, sometimes getting down on my knees to closer admire its loveliness.

MRS. VALERIE WEST. Unquestionably an outstanding variety for size and coloring but none too vigorous in my garden though I have had it only one year.

INDIAN CHIEF is well-named—bold and swarthy like a painted chieftain.

DAUNTLESS, a wonderful new color nearest a true red self; most desirable.

PLUIE D'OR; a disappointment considering the price I paid—had much rather have W. R. Dykes.

These are just a few of my many favorites and among the older varieties I would not be without Princess Beatrice, Lord Lambourne, Hetty Matson, Afterglow, Aquamarine, Folkwang, King Tut, Asia, San Gabriel, Thais, Chalice, Chestnut, Endymion, Marquissette, Isoline, Candlelight, J. B. Dumas, Wedgewood, Coppersmith, Tro-stringer, Cinnabar, and others that have proved most dependable in my garden. After all, are we not laying too much stress on breeding for size rather than for color, grace and charm in the garden? Nene, for instance, is a mammoth flower but I had a thousand times rather have Rosa Bonheur, Churchmouse, Labor, Allies and Allure.

This fall, in October, several varieties bloomed again as if they had not already done their duty in the spring. They were Chalice, Peggy Babbington (both yellows), Queen Chereau, Autumn King, Jean Siret, and Souv. de Chavagnac.

IRIS MEMORIES

EDWARD SALBACH

■ Never have I found a surer way of judging the merit of a new iris than by waiting till long after the blooming season and then looking backwards to see which have remained in my memory. Those that "stick," I can unquestionably consider as outstanding. The iris that I cannot definitely place or which seem only vaguely familiar are not generally deserving among the very best.

In memory now, in the midst of winter, I can recall fifteen new iris that etched a place for themselves in my memory. These fine iris I place in my own personal honor roll of newest iris.

Dividing them into groups, I recollect them as follows:

VARIETIES ALREADY INTRODUCED:

CALIFORNIA GOLD—The new large flowered Mitchell golden yellow. The best description I know is that of the iris enthusiast who gazed, speechless at one of the blooms for a full minute, then declared "It isn't so. There is no such iris!"

ELEANOR BLUE—A very smoothly finished blue that is different in coloring from any of the other blues I have seen excepting the *sibirica*, Perry's Blue.

LEGEND—Probably the most outstanding of all the Wareham iris. Its coloring of crimson claret is entirely distinct from any other iris of similar size.

MARQUITA—A huge variegata from France, with cream standards and falls lined light red, evidently derived from Helios parentage.

RUBEO—Big and bold—in my opinion still the best large red on the market. Always a favorite in the West, and now receiving its due in Eastern gardens.

SUNOL—One of the new Mitchell yellows which will probably outscore all others, having perfect form. Given first award at Spring Garden Show, Oakland, California, 1932, for rating 90 points or over. Color, golden bronze with faint lavender flush in center of falls.

TENAYA—A larger and taller Modoc, with much better branching habits. This is unquestionably the fine Essig variety that has been introduced for many years. Most distinct and outstanding.

SEEDLINGS:

In Sydney B. Mitchell's garden—

ANACONDA—An iris in the copper shades that will set a worthy mark for other introducers to shoot at. The best of several fine Mitchell seedlings in this color group.

GOLDEN BEAR—Far and away the finest yellow iris I have ever seen. Tall, with full large blooms, and perfect deep coloring. The closer you examine the blooms, the more perfect they seem. Actually glistens in the sun. If this variety does not end the quest for a perfect yellow iris, I will have missed my guess.

HAPPY DAYS—A simply huge iris bred of Dykes. Probably the largest individual blooms of any iris grown, and with a splendid iridescent lemon yellow coloring. Not having seen any of the other new Dykes yellows, I can offer no comparison, but if the others are the same type of flower, they will have to be good to better "Happy Days."

PORTOLA—The kind of a variegata we have been looking for for many a year. Twice the height and twice the size of Iris King, with almost identical coloring, plus good branching habits. Seedlings of my father's—

BRUNHILDE—A tall, handsome, deep violet. Distinct from anything I have seen, and a splendid flower.

CHINA ROSE—A small iris of value because of its attractive and delicate coloring. It is a deep pink, but I would risk no detailed color description without having both a bloom and a copy of Ridgway before me.

DARK KNIGHT—A dark, dusky red that somehow has an indescribable bright glowing effect. Produces the same color brightness among the dark reds as Modoc and Tenaya do among the dark violets. Candelabra type branching, and very tall. Seedling of Prof. E. O. Essig: (Although I did not see all of the Essig seedlings last year, one in particular took my eye)—

ESSIG SEEDLING—This one, derived from Professor Essig's Hollywood, has similar habit to King Midas, and is also comparable to that variety in the brightness of its color. As I remember the flower, it was a bright, brownish buff.

Time, of course, plays havoc with many a list of iris or any other flowers, but I have a hunch that in two or three years I can point to this, my Mid-Winter Honor Roll, without having to apologize for my choices.

VARIETAL NOTES

■ ALLURE. A pink blend of very clear color, with a deep yellow edge to the falls below the yellow beard. Good branching with the blooms well placed. It has been very slow to increase and shy blooming in my garden. Opaline is a better doer here.

CALIFORNIA BLUE. A stately Iris. The stalk is heavy but not rigid and carries five nicely placed blooms, the terminal bud being the first to open. The standards are blue with a purple flush, the falls somewhat deeper. Should be divided often as the rhizomes are very large and soon mat, thus causing it to rot.

CAVATINA. Of rapid increase, free flowering and fine form this lavender gold blend is one of the nicest Irises in the garden. The substance of the flowers is good and they are nicely placed on stalks branching above the center. Perfectly hardy.

CHALLENGER. Has set a new standard for intermediates. It is a rich deep purple self with velvety falls which intensify the depth of color. The standards are nicely rounded, the falls rounded and flaring. The stalks are high branched and carry three flowers. As outstanding in its class as were Los Angeles and San Francisco when introduced in the plicata group, it would be a worthy Dykes Medalist could the judges "see" anything other than a tall bearded Iris for this award.

CHERRY RUST. Used in small clumps in the front of borders it would make the garden sing. Its jaunty flowers are rosy orange and mahogany in mass effect, velvety and do not "spot" in rain. It is perfectly hardy and of good increase.

EPPO. This is a smooth, cool pale blue white flower of fine form and substance. The stalks are slender and high branched. It is not a dirty grey blue but glistens in the sunlight and seems to be a very valuable addition to the pale blue class. Has no growing faults so far as I have observed it.

GOLDEN WEST. One of the new intermediates, the 22 in. stalks being high branched and carrying four blooms. It is a deep metallic yellow self, giving the same color effect as Crysoro but the flowers of different form. Has shown no faults in growth here during the years I have grown it under number and has given good increase. The individual flowers remain in good condition for several days.

GLEAM. It has no fault! Comparable to Mary Barnett in color as the latter shows when first opening. Gleam does not fade. The standards are rounded notched at the center, while the falls flare. The beard is deep yellow, giving a glow to the center of the flowers, which are well poised on slender swaying stalks. Of rapid increase, perfectly hardy and one of the freest bloomers I know. Will be splendid for landscape work.

GRUEZE. A small ruffled flower of golden apricot color with a gold beard. The standards are open and do not seem to be overly strong, but it does give a lovely picture when planted near some of the taller, small flowered selfs.

MARY ELIZABETH. A brilliant Iris done in rosy lavender and red tones. The stalks are well branched, the blooms nicely placed. Is perfectly hardy here but of slow increase. Should not be used in a mass or large clump for best effect, but rather in a small clump with not more than half a dozen stalks.

ULTRA. An intermediate and fall bloomer which should be divided often and have the soil renewed yearly to get the best fall results. It is a bright blue bicolor of very heavy substance with horizontal falls. The foliage is too tall for the flower stalks but that is hardly noticeable so fine is the quality of the flowers. It is a rapid increaser and perfectly hardy.

(Taken at random from letters received during the past year from Mrs. Lothrop and Salbach, California (Region 14); Washington (Nashville), Grant (Louisville) (Reg. 7); Loomis (Reg. 12) DuMont (Des Moines) Everett (Lincoln) (Reg. 9); Schreiner (Reg. 8.); Duffy (Reg. 9) Pilkington (English).)

ACROPOLIS. I wish you could have seen Acropolis as I saw it in Mr. White's garden. It must have been nearly six feet tall with enormous rich blooms.—California.

ALTA CALIFORNIA. Worth many times more than votes received.—Minnesota.

BLUE HILL. A compacter larger flower than Sensation with broader falls and of the same inimitable coloring. Beautifully branched, profuse and lasting bloom.—Nebraska.

BLUE VELVET. Increases vigorously for me, blooms splendidly and I love it but it is like most Dominions too bunchy.—Nebraska.

Was a fine thing as far as color and texture go but the spike is far too crowded owing to the high branched stem.—England.

Was a great disappointment because the flower stalk grew only

about a foot and a half high while the plant made a tremendous growth.—California.

CANTABILE. An advance in amoenas.—England.

CARNELIAN. I fell in love with this. It is on the order of Mauna Loa, the standards have a yellow undertone giving a warmer effect. I thought the flower was very smooth and had fine substance and finish.—Colorado.

CHALCEDONY. When it first bloomed I thought it was one I could do without but before the season was over it had captured my heart.—California.

CHARMIAN. An intermediate which blooms like Bluet and Tintallion but is of better coloring with an airy faery grace.—Nebraska.

CHROMYLLA. As I saw it this year it is superb.—Nebraska.

CINNABAR. I think it one of the loveliest of all irises.—California.

DESERT GOLD. It is a fine iris. Have watched it for three or four years and every year it has been good. It will take a mighty good yellow iris to eliminate Desert Gold when you consider all of its qualities.—Tennessee.

As I saw it not worth looking at, pale and insignificant.—California.

GOLDEN FLARE. Was most striking as an apricot and peach blend.—England.

GOLD LACE. Is a smooth well branched yellow blend which I rated 89%. I am not an enthusiast on blends in general so this may be conservative.—Colorado.

G. P. BAKER. A fine border plant; not a strong yellow, sulphur standards and pale straw yellow falls with slight venations.—English.

GUDRUN. A fine heavy white, very large flower with ivory falls and white standards; lots of substance. Falls hanging, not a "perfect" form.—England.

HYPNOS. Was a most attractive iris. It is as fine a blend as I have flowered and attracted most every garden visitor.—Iowa.

INDIAN CHIEF. A good early variety in the red tones.—California.

JEAN CAYEUX. A clear golden brown beauty.—Illinois.

LYRA. Is somewhat novel being a very enlarged Quaker Lady with style and stout texture to it.—England.

MARQUITA. A most unusual thing and has a certain charm. I should say is worth having if only as a "breeder."—England.

MOUNT ROYAL. Was magnificent this year, so many flowers, so tall and well branched it was a striking thing in the garden. Up to this year had thought it much overrated.—Iowa.

MRS. J. L. GIBSON. It is one of the best recent English introductions, a much improved Gaudichau of heavy substance; beautifully poised and of A 1 form but not velvety in falls as in Dominion.—England.

ROBERT. Is almost as deep in color as W. R. Dykes. One stalk forty inches, sturdy and well branched; the standards are broad, closed and the falls broad with no markings.—Kentucky.

ROMANCE. One of the best ones raised in England of recent years, charming.—England.

RUBRO. Outstanding because it has much of the red tones of Dauntless but the flower stalks were as tall as Purissima; individual blooms large and of fine substance and splendid poise. It is well branched.—California.

SERENADE. Is the best pink I have seen so far.—Massachusetts.

TIOGA. A velvety rich deep blue of lovely form and finish.—California.

ZAHARON. One of the most beautiful things in Mrs. Pattison's garden this year; finest color it has ever shown and stood up nobly.—Illinois.

DUTCH IRISES OF MERIT

■ Extracts from the report of the Wisley Trials as published in the *Journal of the Royal Horticultural Society*, Vol. LVIII, Part 2.

Before the days of Quarantine 37 the cost of bulbous irises was such in this country that northern gardens might well afford to replant annually their favorites among the Spanish and English irises. Even about New York one would find them fairly permanent (at least as permanent as most tulips) in the right soil and further to the south generation-old clumps were not unknown. In those days the Dutch Irises were known but not available in many varieties. They owe much to the Spanish

but tend to be larger, more vigorous, and earlier to bloom. This has made them a special favorite for forcing but we know less as to their permanence in the garden.

Eighty-one varieties were represented in the report and the plantings of six bulbs each were examined on two successive years. In the following list only varieties receiving an award are described (the others being merely named) and they are arranged in accordance with the English Color Classification as no American classification has been proposed.

Flowers White or nearly so

POLAR SNOW, A. M. June 6, 1932. 21 in.; F. creamy white, large orange blotch.

WHITE EXCELSIOR, A. M. June 5, 1932. 2 ft.; S. tinged cream; F. creamy white, large oblong orange blotch.

Others: C. VAN DE WINDT, A. L. KOSTER, MT. EREBUS, PHILIP DE KONING.

S. White; F. Pale Yellow

VAN EVERDINGEN, A. M. June 5, 1931. 2 ft.; F. primrose, large orange blotch.

W. DE ZWART, A. M. June 5, 1931. 30 in.; S. creamy white; F. lemon, large orange blotch.

Others: LEONARDO DE VINCI, DE VOS, A. V. D. BERG, RACHEL RUYSCH, HUCHTENBURG, DU CHATEL, VAN DER VENNE, N. DE MOOY, JOSSELIN DE JONGH.

S. Bluish-white; F. Pale Yellow

APOL, A. M. June 15, 1931. 30 in.; S. white, base tinged lavender-violet; F. pale cream, orange blotch.

Others: CORELLI, ALBERT CUYP, HOBBERMA, DR. HARINGH, VAN SCOREL.

S. and F. Yellow

HEEMSKERK, A. M. June 5, 1931. 30 in.; S. pale, sulphur, arching; F. lemon.

ALBERT NEUHUYS, A. M. June 15 1931, 28 in.; S. citron; F. deep glowing orange.

LUCAS VAN LEYDEN, H. C. June 17, 1932, 26 in.; S. bright yellow; F. deep golden.

YELLOW QUEEN, C. June 17, 1932. 34 in.; S. rich sulphur; F. buttercup.

Others: VAN DER HELST, WOUVERMAN, ANTHONY KOSTER, GOLDEN GLORY.

S. Lavender; F. Pale Yellow

PIETER DE HOOG, H. C. 21 in.; S. soft pearly lavender; F. cream.
Others: FRANZ HALS, DAVID TENIERS, HUGO DE GROAT, VAN RAVENSTEYN, FLORIS SCHOLTE, SEEGBERS, VAN BEYEREN.

S. Lilac; F. Creamy-white

THERESE VAN DUYLL-SCHWARTZE, A. M. 28 in.; S. arching, pale silvery lilac; S. bluish-white; F. cream, tinged blue.

ANTON MAUVE.

Lavender Selfs

WIELAND, CASTELEYN.

Mauve Selfs

ADR. BACKER, A. M. June 5, 1931. 28 in.; S. pale violet-mauve; F. paler.

Others: P. CLAEZ.

Pale Blue Shades

WEDGEWOOD, A. M. June 5, 1931. 2 ft.; S. saxe-blue; F. pale sky blue.

HART NIBBRIG, A. M. June 15, 1931. 26 in.; S. lavender-violet; F. azure blue.

Others: H. G. POT, JOSEPH ISRAELS, N. MAES, DAVID BLES, VAN LOO, J. DE HEEM.

Blue Shades

IMPERATOR, A. M. June 15, 1931. 26 in.; S. arching, medium violet-blue; F. rich azure.

THEO WYCK, C. June 6, 1932. 2 ft.; S. violet-blue; F. azure blue.

Others: LISSIE ANSIGH, VAN DER HEYDEN, CELESTIAL.

Dark Blue Shades

JACOB DE WIT, A. M. 26 in.; S. arched, violet; F. rich violet-blue.

REMBRANDT, A. M. 28 in.; S. violet; F. violet-blue, large circular blotch.

J. VICTORS, H. C. 20 in.; S. violet; F. pale azure-blue.

Others: TITAN, HENDRIK POT, PRAECOX, S. DE ROMBOUT, FIRST, GARNIER, A. BLOEMAARD, VAN GOYEN, POGGENBEEK, P. DE MOULYN, N. KEMP, BLUE CELESTE, HOOGSTRATEN, A. SCHEFFER.

S. of Blue Shades; F. Smoky Lavender

Others: GOLTZIUS, BASTERT, THEOPHILE DE BOCK, DIRK VERBEEK, JACOB MARIS, PIETER CODDE.

All of these Wedgewood and Imperator are probably the best known but practically all the good varieties are obtainable in

this country and will prove particularly lovely rising behind **violas** of selected tones or the yellows and whites and *Phlox divaricata* or low Speedwells. With their slender foliage and poised flowers they gain little in effect planted behind other irises or even foot high masses of foliage.

The Editors would greatly appreciate members reporting as to the permanence of their bulbous irises in various localities and soils.

BACKGROUNDS

R. S. STURTEVANT, M. L. A.

■ Few of us are so fortunate as to have many locations wherein irises may be seen against the sky or against the blue of the distance but probably everyone can find, through careful observation, a spot or two where the rays of the early morning or of the late afternoon sun will illuminate a special grouping. Such a spot is worth finding even if we must set chairs out at the edge of the lawn or through the garden and watch their shadows.

Locations where light irises may stand in silhouette against relatively dark shadows are often almost as delightful in their natural charm and these may always be developed on even the smallest of lots. Shrub plantings, particularly if "faced down" (an all too horribly descriptive a phrase) offer no interesting shadowed areas but if such a planting is more suggestive of a natural hedgerow with an occasional small tree or high arching shrub then in the foreground we can plant our irises to be revealed against the resulting dark shadow. It is really only when our shrub masses show such interesting variations of light and shade or texture and color that they serve as worthy backgrounds. All too frequently does their mottling actually distract from the picture.

Occasionally irises perched at the top of a wall may be seen from below against the sky and even more frequently they may line the terrace to be outlined against distant tree masses most pleasantly and, less often perhaps, we may look down slightly and see them silhouetted against the green of the lawn or a turf bank.

“Background” carries three intimations to me. In one case it limits the view. I can see nothing beyond. In practise this often means that at approximately the level of my eye nothing is to be seen—unless I lift my gaze. In another case the pictorial composition is such that I am not tempted to look further; a most happy solution but one more easily achieved for the eye of the camera than for those of an observer. Incidentally a few stalks of iris are more easily made a part of a picture than great masses of them. Thirdly and more commonly, the background is almost immediately behind our flowers and we must consider it almost as carefully as though we were arranging them for certain locations within doors.

In the earlier instances we have been considering pictorial compositions and specifically the effect of light shining on or through our flowers but now we must consider the actual texture and color in close juxtaposition of flower versus background. Evenness of texture and of color is to be desired whether we use clipped plant materials or one of a variety of structural materials. The alternating tones of a picket fence are often lovely but are not good as a background; its charm is in its design or in the casual way the leaves and flowers peer through. A line of mixed shrubs again is not ideal though one shrub in full bloom may create the picture with suitable irises in the foreground. In this case we have approached sufficiently near to have our interest concentrated on a planned composition and we are not far enough away to be distracted by what is happening to left or right. With a broad foreground of grass a whole line of irises against a line of *Spirea Van Houttei* or yellow roses, and a suggestion of trees beyond may be as fine a picture.

When one considers the use of a background it is evident that it must be higher (or at least appear higher) than the irises. Curiously enough irises peering over a wall have none of the charm that we associate with hollyhocks or larkspurs doing just that. And, as seen from within, our interest is not on the irises but on the beyond and, to an iris fan, irises should be the center of interest.

It is a relatively simple matter to fit our color scheme of irises to a background of tinted stucco, to painted wood, to brick or stone but as the wall surfaces become rougher we need both more contrast of tone and bigger masses. One of my earlier dis-

appointments was a carefully planned scheme of whites to purples against a six foot dry wall. There was variety of stone color and the crevices became dark shadows and my scheme was wrecked because, from only a slight distance away, the irises toned in with the light and dark of my background. In replanting I used bigger masses of brighter color and they are lovely rising from a six inch curb of stone similar to that of the wall behind.

Even simpler is the placing of irises against a clipped hedge of darkish green as relatively few varieties appear of the same tone and even they may stand in front of taller, light flowers.

A good background, unfortunately is all too rare and when found I usually prefer to make the most of it by keeping the planting relatively narrow—for irises a four-foot bed being preferable to the eight-foot width that would display delphiniums to advantage.

With wide masses of irises I frankly care little what may be beyond but I do prefer that my view of unsightly structures should be at least diverted. We may find such masses field cultivated or, in a garden, where the paths are none too wide but if it be a garden we are expected to walk through its paths and in the outer beds at least there should be background if only because a garden that gives no sense of enclosure, of being shut away from the world becomes merely a planting of flowers,—undeserving of the name garden.

And for such enclosures I invariably prefer plantings of one shrub as a backing to each bed. A well-trained row of raspberries is far more effective than a row of one each “treasures,” *Rosa Hugonis*, *Lonicera Korolkowi*, *Philadelphus Virginal*, *Viburnum Carlesi*, *Caragana arborescens*, or *Syringa* Mme. Morel. Lovely as they may be they should not be put in a row and used as a background. Individually the gray of the *Lonicera*, of *eleagnus*, or *juniper* may be right with a touch of yellow or darkest irises. The very light green of *caragana* may be equally right for rose-toned blooms and the purple of *Prunus Pissardi* again good with either rose or bronze and yellows. But the edge of grass in lawn or wide curving path is a better place for such niceties of composition. It is only for short periods of time that we can afford to have the walls attract our attention.

Where it is not practical to change an enclosure of all-too-well

mixed shrubbery seek to develop interesting shadowed areas. Let forsythias and roses sweep to the ground despite the space they usurp. Give the lilacs and mock-oranges "legs" so that your flowers may have a dark shadow behind and don't do first one and then another in regular succession but think of the approach, the spots from which you will best appreciate the result.

In foliage backgrounds we must consider two points—density and habit of growth. In the clipped hedge we prefer in addition small leaves that do not show the shears conspicuously when cut. Even a deciduous shrub, if dense, makes an adequate screen in winter. And an erect, many branches from the base, habit permits the light to reach the base of our hedges, the most difficult spot for density.

With these desiderata in mind box and yew would be a first choice among evergreens, Japanese holly and azalea rather unusual second choices where hardy. *Pyracantha* would prove a possibility and, with support, the evergreen bittersweet. The larger leaves of holly, of rhododendron, laurel, or, in the south, of privet, *Osmanthus*, *aucuba*, and *viburnum* seem less adapted to clipping though the habit be both erect and dense.

The difficulty with trees as relatively low hedges is the space they take and the fact that, unless freestanding and away from other growth, they tend to lose their lower branches, a most undesirable development for a garden enclosure.

Of deciduous material, privet of some sort seems the most common and the best except in very poor or shady sites. Many other shrubs lend themselves to pruning and among trees hawthorn and hornbeam are particularly responsive. There is no lack of material for background and the absence of some sort of enclosure is the chief defect in many a colorful garden. And, if you must be practical and grow your irises in lines, the protection from wind afforded by even four foot enclosures is often worth the space they take. For the untrimmed hedge remember that an arching habit of growth takes added space and also forms a less pleasant background than one that approaches the vertical. Privet, lilacs, Gray Dogwood, are much to be preferred to forsythia, bush honeysuckle, mock orange, or *Rosa Hugonis*.

At the big flower shows it is interesting to note background materials. Young larch gives a tender green; young arborvitae,

hemlocks, or yews maintain their place for the short display—the last two rich and dark; stone and wood, brick or plaster, many painted surfaces may all be found. At Boston this year The Chestnut Hill Garden Club put up a beautifully worked out display in the modern manner. The plan suggested a stage setting and both wings and backdrop were boards painted a royal purple that was almost black in some lights (or rather shadows). With white covered paths and white and lavender and purple repeated in chair coverings, in stocks, and heliotropes the color looked schemed. In an all iris (and hence short season) garden the use of painted back-drops might be most effectively used and we could well afford to simulate the striking black velvet contrast of the show table. Why not temporary four-foot painted panels to protect our favorites from harsh winds, even if only with angular screens about the clump, how much we might enhance the effect.

SPECIES NOTES

(Photographs by Lady Collet)

Iris Korolkowi Regel.

■ This, the most well-known species of the *Regelia* section, requires a "warm well-drained position and a period of rest in summer" and in following this advice we planted ours in the rock-garden on a sunny, gravelly slope, the only soil preparation a good mixing in of leaf-mold. This was about 1914 when it was still possible to import roots of both *regelias* and *oncocyclus* from Holland most inexpensively. Of the many species tried *korolkowi* (and one or two of its many color forms) was the only one of these two groups that proved at all permanent and reliable in bloom for even a few years. In our attempt to stimulate Turkestan conditions we erred in providing a too clear gravel as the plants prefer a strong loam.

The red-skinned rhizomes carry but few fibrous remains of old growth and in their smoothness suggest some of the "sleek look" that I always associate with this species. The leaves are narrow, rather palish, and, in some plants, strongly tinged with purple at the base. As pictured in *The Genus Iris* the flower is a bit smaller than in our illustration, the color a pale olive-green veined a reddish brown, the signal patch a darker brown on a creamy-white ground, but I am more familiar with a form (possibly var. *Leichtliniana*) with a much purer cream-white ground, more purple veins, and an almost black signal patch.

This species seeds freely (relatively speaking) and when crossed with *Oncocyclus* has given rise to many lovely varieties while *Pogo-regelia* crosses are also well-known though often lacking in both color and form. I know of no named varieties of this last sort though, about 1916 we received a large consignment from Mr. Williamson which, with few exceptions proved to be oddly colored flowers, olive or greeish yellow often flecked or streaked with dull purple, and all with incurving falls which completely destroyed the odd fascination of the *Korolkowi* parent.

Iris chrysographes Dykes.

Our reaction to this *Apogon*, first collected by E. H. Wilson in 1911 in Western Szechuan has been most dependent upon the



Lady Collet

REGELIO-CYCLUS HYBRIDS THAT SHOW IN FORM AND PATTERN
THE INFLUENCE OF IRIS KOROLKOWI



Lady Collet

HYBRIDS OF IRIS KOROLKOWI AND POGONIRIS

quality of selected plants. Like the Siberian Irises it is easily grown from seed and surprisingly variable in the richness of its purple and the contrast of the golden veining. In the better forms this rich coloring is memorable and the vivid contrasts well-presented by the drooping falls. As a clump the habit of leaf and stalk is less erect than in most of the Sibiricas and the green noticeably brighter and in Massachusetts the plant requires much more moisture, feeding, and cultivation to approach the others in garden effect. I have seen quite spidery forms, others with the gold reticulations hardly apparent and some entirely without the rich velvet that can be so lovely.

A considerable number of seedlings that have been raised in Maryland in small lots from different sources have shown the same variation in coloring with enough to make one wonder if this iris produces the same chance matings that occur with some of the other Chinese Apogons, if they are all grown in proximity. When one recalls that Mr. Perry has crossed this species not only with *Bulleyana* but others this seems likely.

In planting *chrysographes* its deep coloring can be enhanced by using nearby the pale yellow *I. Wilsoni* and masses of the deeper yellow but lower growing *I. Forrestii*. The latter in Maryland is much more free-blooming than *Wilsoni* and its deeper color makes the greater contrast.

This year by accident, a single clump of the wild *Iris Kaempferi* bloomed in the line with *chrysographes* and *Forrestii* and while distinctly later in flowering overlapped the season enough to add its deep red purple flowers to the procession with the result that the purple of *chrysographes* appeared more of a blue purple than it really is. It is unfortunate that in the pursuit of the horticultural variations of *Kaempferi* we have not had the wild forms as well, for their long and slender buds opening into the drooping long petalled flowers adds another form of iris flower to the scene. *Iris setosa* in one of the oriental forms, does not add as much as one might wish for no flower here has approached the bloom figured in Dykes, the Genus *Iris*. Rather they have appeared in effect more like a well-flowered clump of our own *virginiana* until one looks closely and missed the standards or until the pods begin to form and show their curiously puffy and inflated cells.



Lady Collet

IRIS CHRYSOGRAPHES



Lady Collet

IRIS MISSOURIENSIS

Iris missouriensis Nuttall.

As a member of the Longipetala Group of Beardless Irises this species has a wide distribution between the Rocky Mountains, the Cascade and Sierra Nevada and verges almost insensibly into *I. montana* to the eastward. This last has pointed standards and usually only two-flowered. Both like a heavy loam and both dislike transplanting so that, if the soil be too light, a liberal top-dressing is to be recommended. The stiff foliage vanishes in late autumn and it carries its rather spidery blooms well above the foliage thus differing from *I. longipetala* to which it is closely allied. The color is white so diffusely veined with violet (except for the ridge flanked with yellow) as to appear a pale lavender. As with the Californian species we have had little success with



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IRIS FOLIOSA



Lady Collet

IRIS, DOROTHEA K. WILLIAMSON

this species, quite possibly because our soil is too gravelly and well-drained. Its hardiness is not to be questioned.

Iris foliosa Bush.

The botanists seem to be in complete confusion as to the hexagona-foliosa distinctions and, as mere gardeners we may, perhaps, never be quite sure of what species we possess. Their likeness in blue-purple tone and shape is certainly more apparent than their differences, the dwarfness of *I. foliosa* and the more glaucous tint of the leaves. I also suspect that, in the north, *I. hexagona* may frequently be less happy and develop a low habit and abnormal, short, weaving flower stalks. At any rate both seem to be reasonably hardy in Massachusetts and fairly reliable as to bloom in a loam where the roots may reach moisture. In themselves their color is the only possible charm but as parents they have given us the rich red-purple of Dorothea K. Williamson which, though a hybrid, seeds quite freely and leads on to big blooms of delightful pink to purple tones. That the flexuous stem often is apparent (and particularly where the soil is not rich and wet) becomes a minor misfortune.

THE FAMILY TREE

Whites. Prof. Mitchell writes in *The Iris Year Book*, 1933.

“It is rather odd that only in recent years have we had good white Bearded Irises, for apparently albinism is found through the family. The very first white I ever grew, Innocenza, was apparently an Italian albino of *I. variegata*. Yet I might almost say that all the fine whites go back to Sir Michael Foster’s seedlings, Kashmir White and Miss Willmott, both probably *cypriana* albinos.

“Thus Purissima is Conquistador × Argentina, the latter a white from Caterina and a Kashmir White seedling; Shasta is Parisiana by the same pollen parent; Easter Morn is California Blue (a Conquistador seedling) with pollen of a white sister of Purissima; Santa Fe is Conquistador × Miss Willmott, and Natividad, my last white, with a golden heart, is a seedling of Marian Mohr, itself derived from Miss Willmott by pollen of a yellow seedling.

“Dr. Ayres’ Venus de Milo is from Kashmir White, and so, I believe, is Wambliska (from Jacob Sass) and Sophronia (Mor). Another line of recent whites, Donahue’s Polar King, and probably Mrs. Dykes’ whites, are from Moonlight, whose parentage I do not know.

“In general the complaint made of the best whites is their dislike of wet winters, but inasmuch as whites crossed with coloured flowers give a percentage of whites, why have not breeders or amateurs, with whom Purissima, let us say, is difficult, cross it with pollen of moisture-resistant varieties, selecting from a sufficient number of seedlings what is best for their own conditions? May I remark here that there is some absurd idea among many that plants bred in a mild climate are necessarily tender, or that a certain parentage will settle the question one way or the other. Resistance to a given set of conditions is, of course, largely a matter of parentage, but sister seedlings differ in this as they do in colour or form. Mr. Mohr’s Esplendido, though it contains more *mesopotamica* than Purissima or San Francisco, is perfectly hardy and easy at Wisley, and Los Angeles, a sister of San Francisco, is noticeably more easily grown and more floriferous than the latter in England.”

TO READ OR NOT TO READ

■ NEW GARDENS FOR OLD, by Stuart Ortloff and Henry B. Raymore. Doubleday Doran. \$2.00. The art of designing gardens and estates is not easily put into words and the immediate need of books adapted to the use of the average small home owner is most apparent. Despite the selected subject we find two chapters of remodeling, four on the various phases of design, the plan the planting, application of principles, and the special problem of the flower border and, finally two chapters on maintenance of lawn and estate. Statistically there are eight pages on remodeling, forty odd on maintenance and the balance (120) on design, well illustrated and with typical plans with keys suggesting varied planting possibilities.

Though I question the title, the book is not only readable but practically all general principles are immediately brought out by an easily recognizable example. The organization of the plan

advised is excellent, the knowledge shown of plant materials and especially of the use of perennials for effect most helpful and the book is excellently indexed. That I question his selection of an average sized lot as being more small town than suburban, the consistency of certain references to this small-growing plant which is later listed as relatively quick and large growing or, again, fulmination against spiky foundation plantings and loud variegations on the one hand and a recommended plan with a mixture of arborvitaes (dwarf to be sure) yews, and pine and juniper on the other. I confess my own preference for not over four different plants with or without ground-cover in even a relatively large planting against the house, militates against any endurance of ten different things in all textures and tones of green. A similar complaint might be made for the one each edging of the boundary planting and the emphasis on boundary planting as such even though, elsewhere, he brings out most delightfully that we should study our garden plans from the inside (where we are) first.

Two unusual and most useful inclusions are "zones" for plant hardiness based on the average number of frostless days in a locality, and the listing of all shrubs used with a "buying height" and a "ten-year growth height." Often optimum growing conditions are assumed but it is a fine idea. In fact, no one, with a small place or even just a garden can fail to learn much from this book and to improve their design and plantings. That the results will not compare often with professionally designed gardens would not be surprising but at least the intelligent reader can go ahead and plan and, if worst comes to worst and the problem prove unsolvable he or she is ready to gain much from a professional consultation at a small fee. Few amateurs realize that the landscape architect is available for consultation, and that *after that* plans and actual supervision may, or *may not*, be arranged for as the client prefers.

"ASK ME ANOTHER"

■ IRIS ROT. This destructive condition was more prevalent in 1933 than in many years. Many letters were written to growers to find just what factors were causative of the disease and what means were taken by them to combat it.

Growers reported widespread and costly damage to their plantings. Some of the older catalogs, I have in mind one of the late Mr. Williamson's, and some articles in various BULLETINS, supply valuable data on the subject.

In order to prevent rot certain fundamentals must be observed. I have found by bitter experience that one must avoid the late planting of extremely large and fleshy rhizomes. When you buy from a region which grows this type, ask that the iris be shipped, if possible, at the end of the blooming season, or if your purchase is belated ask that the rhizomes be thoroughly sun dried before shipment. It would be well to give them further sun ripening before planting.

If you live in a region of low temperatures, which is subject to alternating freezes and thaws, it is better to cover the beds after the ground is frozen. If you do not do so new plantings and tender varieties will be liable to bacterial and other allied infections.

Most of us do not live in a salt hay district. There is too much weed seed in straw and hay. An excellent substitute is found in wood-wool, or excelsior. It does not pack as does straw or become mouldy in early Spring—it also provides adequate ventilation.

Heavily limed plantings are more prone to rot than those in soils of acid or sub-acid reaction.

In most sections raised beds with adequate *subsoil drainage* and rapid *run-off* are essential in the cultivation of bearded iris. Air drainage is a prime necessity. Crowding in the clump or in the border only invites disaster.

You must realize above all that sunlight in generous amount is as vital in the prevention of rot as it is for the carrying on of the life processes of the plant.

Air drainage and sunlight also prevent injury to the tender spring foliage from other sources than those of frost and thaw.

Regions in which the borer is present have more rot than those which are not infected. So if you wish to prevent rot get rid of the borer. This can be done by frequent transplanting, and by the use of Dutox applied several times before blooming time. It is hardly necessary to emphasize the need of removing all trash and litter from your beds, together with the leaves of the plant as they ripen during the summer.

The use of cover plants between your iris is only tempting fate. Keep your beds clean, and well cultivated.

If the above simple rules are followed, you may use *well rotted manure* between your plants *without fear of infection*, otherwise look out!

A splendid demonstration of how much abuse an iris can stand and how efficient the treatment of rot can be, comes from my own garden. Three years ago the beds were made over in part.

The ground from beneath a pile of well rotted manure was used as a six inch top-dressing.

We had a heavy rain, followed by excessive heat. In about ten days the iris to the number of a couple of hundred of the best looked badly. Investigation showed the rhizomes in very sad condition. Practically every fungus and bacterial infection possible was present. It was too late that night to do anything but pull them from the ground and let them lie. Next morning they were wiped free from slime and rot, dusted with copper carbonate, and then laid in the sun for two days. They were replanted in the beds, after spading in the top layer thoroughly, plenty of copper carbonate was used as they were planted, the ground liberally dusted, and only *one rhizome* was lost!

It is self evident that a healthy plant under proper cultural conditions is not as prone to infection as the ones which have suffered from either thermal or mechanical injury, and that excess moisture and heat are potent factors in the production of rot.

The infection which is either bacterial or fungus, or both, invades plant tissues whose resistance has been lowered. Once infection has taken place it rapidly spreads through sound tissues and may destroy the entire rhizome, or at times the entire clump before its presence is suspected.

One must be vigilant in Spring to recognize the injured plants. When once found the treatment is a simple one.

To excessive moisture we must add a second factor of high temperature before the yeasts, molds, slimes, and bacteria can become a danger.

There are other periods of the year besides Spring in which rot runs rampant, those of summer when excessive humidity is accompanied by high temperatures. A warm rain of three or four days' duration in midsummer is sure to be followed by rot. When the housewife finds the bread in the steaming breadbox all soured and mouldy, then hie yourself to the garden and inspect each individual plant—take measures immediately to stop the infection at its beginning.

Each plant which has borne a bloom stalk is a prospective patient. The outer leaves which may appear unhealthy, yellowish, should be removed as well as all the ripened ones. These outer leaves can do no harm if the weather is dry, but are the source of serious trouble if they begin to decay. The infection then rapidly spreads to the rhizomes.

Not always is rot confined to the garden. Some times a part of a shipment of roots will be destroyed or greatly injured. This can be prevented by proper *sun-curing* before shipment, and by proper packing between layers of woodwool in a *ventilated* carton. This proper packing is carried out by almost all growers at the present time. All roots should be dipped in copper carbonate dust at the time of packing.

Mr. M. E. Douglas tells of a kind of dry rot, black in color, infiltrating the rhizome, which proved destructive with him. I have met with it a few times in iris and in other plants with fleshy roots. It is a black mold which grows in from a cut or injured surface under conditions of high humidity and high temperature during shipment. If the rhizome is not already destroyed cut off the blackened area, *sun-dry*, and use one of the preparations which have been found to be successful.

I shall purposely omit any specific consideration of the causes of rot, except to say that in certain types of foul rot certain bacteria are responsible; yeasts, molds, and slimes also play their part. This summer the so-called mustard-seed rot was prevalent, particularly interesting and fascinating because of its orange yellow spore cases sprinkling the ground out from around the rhizome, while the white mycelial threads form a cob-webby network on the ground and the rhizome. Pretty, but dangerous.

In the treatment of rot, it has been often recommended that the rhizome be lifted, the rot cut out, the root soaked in a chemical antiseptic such as bichloride of mercury, semesan, or some other organic mercurial compound. It is also recommended that the rhizome lie a day or two in the sun (sound advice), and that the soil be sterilized with the same solution used to soak the root. Some writers state that the hands, the knife or the spoon, must be sterilized after treating each affected rhizome. Imagine the task confronting one in a badly infected planting of thousands of iris!

I have not found such procedures necessary, nor have I found the mercurials of any great value. They are, besides, dangerous to use without great care. I presume that they are of value in some regions. Formerly I did lift the rhizomes, remove the rot, plant the rhizome exposed to the sun, the only instance when it should "sit like a duck on the water"! After replanting, the rhizome was thoroughly soaked as was the ground about it, with a strong solution of potassium permanganate.

For three years I have not found it necessary to go to all this trouble. If rot is present, the rhizome is bared, the affected leaves are removed, the rot wiped away with the finger! Then a liberal amount of a copper carbonate compound such as Cupro Japonite, Copper Carb, is dusted freely into the cavity, and the ground sprinkled liberally with the same. If the foliage is too heavy some can be cut away to allow the sun and the wind ready access to the rhizome.

At times when it was impossible to give individual attention to the infected plants, I have not taken as much trouble as indicated above. A handful of copper carbonate dust was thrown upon the infected rhizome and the rot ceased.

Copper carbonate has the advantage of being cheap, is not poisonous, has no caustic effect upon the plant, does not stain the fingers, does not require solution, and what is most important *does the work*.

In the final analysis it is certain that it is better to prevent rot than to cure it. Good gardening for the iris demands ample sun, soil drainage, air drainage through open planting so the winds may blow moisture away, full cultivation, and painstaking tidiness in the beds. If these principals are adhered to, the most of your troubles will be over before they begin, and iris rot will become merely a nuisance and not a menace.—DR. H. H. EVERETT.

TID-BITS 34TH

■ WINTER INJURY. *A. W. Mackenzie, Indiana.*

From personal observations made over a period of years, I have arrived at a conclusion, that as a rule any Iris which is a derivative of *Amas*, *trojana*, *cypriana*, *mesopotamica* or *Ricardi* is subject to winter injury, here in central Indiana, if it has tall winter foliage.

Did some one say that *Dalila* was a *Ricardi* derivative? If it is, it is perfectly hardy any place because it gets its foliage habit from its variegata parent.

There are probably exceptions to the rule, both ways, as for instance, *Purissima* does not have very tall foliage but is very tender while *Brenthis* does, but is hardy. Check for yourself the known tender ones in the first part of Countess Senni's list. I know ten.

In a check of over a hundred of the older Iris, *Ballerine* had the tallest winter foliage and was the tenderest except probably *Magnifica*. *Dalila* had the shortest.

I am also convinced that a good deal of the winter injury to recently transplanted Iris comes from the fact that most of them go into the winter with new foliage that is taller than is normal for the variety and there is no old foliage for protection.

Most of our injury comes not from late freezes but from alternate thaws and freezes and the temperature changes are so great that mulch just protects from the direct rays of the sun.

Letters from California written in January mention a number of varieties in full bloom and interesting seedlings, not only of pogocyclus blood but also from *Lady Paramount*, the little-known but highly rated light yellow of 1932.

COMMERCIAL PRACTICE! "One thing I should like to see done at an Annual Meeting would be to have a demonstration of cutting up a clump of irises and show to the *Growers* and *Buyers* present just what you ought to get when you buy One iris rhizome. Not only are the amateurs sick and disappointed over the small butchered things they get for much money but I have heard several of the growers literally "pan" other growers for the deals they get from still others. One friend is "off irises for life." She showed me a two-year-old—that has not grown enough to

bloom yet. It was simply too small in the beginning. This same party paid \$20.00 for George Yeld several years ago and you know what it is now. So with these two—and about ten other similar—experiences. Her words are not surprising.

“And some action should be taken about the amateurs who cut prices in a small leaflet and when you send the money *by return mail* inform you that they are sold out. In one instance with me they proceeded to knock the iris and advised me not to buy as they were discontinuing it. I couldn't help but wonder whether they had ever had it for it was a magnificent thing at Freeport.

“What constitutes an Amateur and a Professional in the A. I. S.? What enables you to get wholesale prices? If I sell a few undesirable varieties from my garden am I entitled to wholesale prices if I get out a mimeographed letter offering varieties I do not intend to sell?

“Does membership in this Society entitle a member to wholesale rates? This is a question often asked and I have always said, ‘No, unless you buy and sell irises as a business’.”

The above extracts are evidence of current practises, practises affecting high priced varieties in particular. Unfortunately the discrediting of an individual discredits the product in general and although the growers are now considering a Code of Fair Practise under the NRA the buyer is the one who is most likely to know of evasions.

Iris Albispiritus Small. (See frontispiece.)

As the color plate for this issue was not ready in time for the text that was given in the A. I. S. BULLETIN for April, 1933, the text written by Mrs. Peckham is repeated here.

The Ghost Iris is a native of Florida where it has a very restricted range and occurs only in small colonies, in a usually dense turf of grass, sedge and lowland flowers. It was found early in 1927 near the Caloosahatchee River some twelve miles above Fort Meyers. Up to this time reports of white irises discovered in this region had been disregarded as it was thought that they were only albino forms of *I. savannarum* which is common in the disetrick. Several colonies, however, of *I. Albispiritus* were found growing on both sides of the river by Walter M. Buswell during the spring of 1927 and plants were sent to the New York Botanical Garden for trial. They bloomed that autumn and proved to be quite different from *I. savannarum*, in the long falls with slightly wavy edges, the

finely toothed standards and style branches, in fact in the whole character of the flower.

In a way this iris resembles the Louisiana species and it is curious that crosses made with it produce red and pink forms not unlike those obtained from crosses made with albino *I. giganteaerulea* and *I. fulva*. This gives much food for thought.

The name Ghost Iris was selected by Dr. Small because in its native habitat one does not notice the foliage or stems from a distance and the white flowers appear to float in the air like some Will-o'-the-wisp or St. John's Fire along the marshy river's brink. It is a pretty thing for the garden though in the North it does not reach the four-foot growth that it does in Florida. The bright yellow of the crests sets off the flower and if it is possible to get a good patch in bloom up here, it could really be termed a flaunting style of iris. Members living in the southern Coastal Plain may expect a real success with *I. Albispiritus*.

ETHEL ANSON S. PECHHAM.

Technical description may be found in Small's Manual of the Southeastern Flora, page 351.

Notes from a New England Garden.

Your editor has asked for experiences with bulbous irises. *I. reticulata* comes through the winters here (Hartford, Connecticut) 100 per cent, if given a good peat moss mulch. Increase, after two years, is very satisfactory. A very happy grouping may be made, with the two crocus species, *C. susianus* or *C. Korolkowi*, and with *Anemone pulsatilla*. *I. bucharica* was tucked into a warm corner of the rock garden, with a wishful, but not very hopeful prayer; was given a 4-inch peat mulch, and has more than doubled in two years. A planting of about 2,000 Dutch irises, with some Spanish and *tingitana* were given a 3-inch peat mulch the first year, and these also gave us almost 100 per cent bloom. A trial digging in the fall, showed quite remarkable increase.

I. unguicularis, or *stylosa* (not bulbous, but of interest in N. E.) grew splendidly for four years—with nary a bloom! We were about to give it up as hopeless for this locality, when several plants surprised us with good blossoms last spring. This is grown with no protection, except some pines to the northwest. So “ye of little faith”—have courage!

MRS. L. W. KELLOGG.

Iris dichotoma

My report on *Iris dichotoma* is that it is entirely hardy here without protection. Bought seedlings from H. S. Jackson in 1925, one plant is still standing where it was originally. Plant is now perhaps a foot across, the clump has not grown larger in several years. This is in a very dry, well-drained spot, and has not been surrounded by self-sown seedlings as in a moister part of the garden, also where the soil was better, but the mother plants did not winter so well there. Have had it in bloom on old plants as early as July 9th and the newer plants carried it through into September. In 1932 the siberian, Florrie Riddler, bloomed until July 5th and that was the year I recorded the Vesper Iris opening on the ninth. Have been trying for iris from April until freezing, hence my records. It has become quite a habit to save the seed from *dichotoma* and pass it out to garden club members when I happen to be invited to tell about iris. Most of the reports are success with the venture. Of course if they are not interested they just forget to ever speak of it. Have never bothered to sow seed, there was always plenty of the self-sown seedlings coming up everywhere near, and all mine have been true to type, no decided variations. It has been the center of interest at some flower shows at three o'clock when a crowd would be waiting to see it open.

MRS. W. G. DUMONT, Des Moines, Iowa.

I have *Iris dichotoma* planted two years ago in my garden. It was a commercial size, from Robert Wayman, and the first summer did not bloom or appear to grow much. We have had two severe drought years and I do not water my iris at all. Last spring it made fine growth and we had only one rain over a period of nine weeks, then only one for another very long period during the growing season. However, it bloomed and was in bloom for a very long period of time. I hope to increase my stock as it blooms at a time when there was little else in my garden, the extreme heat and dry winds of middle summer making it difficult to grow many of the annuals that should bloom at that time.

I saved and planted seed which were plentiful. I keep six hives of bees in my garden and hardly have an iris that will not seed if I let it. Lots of our bearded iris seed burned last summer, literally cooked in the pods, but we were able to save some which were partly shaded by some cherry trees.

I bought seedlings of *Iris dichotoma* from a local florist and nurserymen three years ago which turned out to be blackberry lily, but I was not sorry as they are perfectly happy and have spread and bloomed and I understand they are difficult in some gardens here.

MRS. C. L. HENDERSON, Wichita, Kansas.

I have grown *Iris dichotoma* for a dozen years now and find it true perennial. As this plant hails from central Asia its hardiness cannot be questioned, and it is also very drouth resistant. I am growing it on upland silt loam and where it has good drainage. The original clumps are now a foot across and throw up several dozen stems, averaging 44 inches in height. There is a wealth of bloom, in the evening only, some stems producing up to 24 flowers, which open in succession. Masses of seedlings sprout around the clumps in the spring. Color varies slightly from light to dark bluish purple. The creamy white, dotted dark purple, is a trifle larger, and comes also true from seed. I have not attempted any crosses between the two varieties.

H. P. SASS, Washington, Nebraska.

I can't help putting in my word for *dichotoma*; it has been very permanent here. Seeds and seedlings are produced in abundance. The form I have is the lilac on creamy white, not dead white nor true creamy white either. I have been on the trail of *mellita* for a long time; hope it comes through the winter in Maryland.

ROBERT SCHREINER, St. Paul, Minn.

Iris dichotoma with me is not very permanent, usually two-three years. The second year they are at their best, flowering early and late. The fourth year the plants are not so strong and usually die. They usually do not increase to more than five or six stalks here. They do not self sow. Possibly we disturb the ground around them too much. We have had some flowers white marked a decided brown, with no lavender spots. I did not save seed of these plants in particular so do not know what the progeny might be. Yes, old plants do seem to flower earlier than seedlings. Our soil is not especially well drained, being fairly flat and rather heavy.

CARL STARKER, Jennings Lodge, Ore.

I have often wondered why we heard so little of *I. stylosa*. Mine blooms off and on all winter, plants set in the fall of '31 bloomed January 21, 1933, and on into May. Started again in November and bloomed until middle of December and now, Jan. 22, 1934, are full of buds and will open as soon as we have a few warm days. Such a lovely thing to find in the midst of winter! February will bring *reticulata*, March *tuberosa* and *persica*, then lovely *Bucharica*. I have *I. dichotoma* from seeds sown Dec. 18, 1927, potted last of January, 1928, bloomed fall of that year. Increases each year in size of plant and number of stalks of bloom. Not caring much for it, I cleaned up what I think were seedlings. Will pay more attention to it this year.

I have *I. tenax*, *I. bracteata*, *I. Douglasiana* and the Louisiana species from seed. Came freely and easily and *I. tenax* bloomed in about fifteen months. Now I am hunting seeds of *I. Rosenbachiana* which Dykes says is white with crimson markings and which I cannot find.

. . . I think I only lack the fall-blooming irises to have them every month of the year and *I. stylosa* takes care of more months than any other kind.

MRS. FRANK GOULD, Towson, Md.

Since a week ago, I have looked many times at the bulbous iris bed, for Dutch Iris, Wedgewood opened its first bloom then and will have reached its peak in a few days. This is a medium blue with large deep yellow signal; flower six inches across, height thirty inches. Before Wedgewood is entirely gone, Adriaen Backer, a fine lilac to lavender will come in. And so the procession will continue until the middle of April, varieties coming into bloom at five to ten day intervals as follows: Yellow Queen, Hotchenburg, white standards, yellow falls; White Excelsior; Albert Cuyp, white; Imperator, dark blue; D. Haring, white; Reconnaissance, bronze; Thunderbolt, bronze; Cajanus, yellow. The last six come almost together, the flowers vary from three and one-half to five inches across and the height from twenty-eight to thirty inches except that I have had stalks of Cajanus thirty-nine inches tall when shaded from the afternoon sun. None of these irises are permanent with us for they all sooner or later get a mosaic disease which spoils the clear color of the petals with splashes of darker color and weakens the plant so that stems are short and flowers

imperfect. *Imperator* and *Cajanus* are the most resistant to this disease. At present, I am growing the Dutch and Spanish irises in an elevated bed, insulated from the ground with crushed rock so that the bulbs can remain undisturbed and dry in the summer time. Before I had this bed they were set out the 15th of October and dug when they began to die down. This elevated bed is used also for *Regelio-cyclus* and *pogo cyclus* irises and for *ranunculus* and *anemone* bulbs, each to its own section, which can be watered separately as needed.

I am growing a couple of dozen Louisiana irises, including the older varieties and hybrids, as *fulva*, *foliosa*, *hexagona*, *Purpurea*, *Dorothea* K. Williamson, and some of Dr. F. F. Williams' seedlings. The newer varieties were acquired late last year, 1933, so I can't say much regarding them except that as I saw them in the gardens, they seemed to have plenty of bloom to make them well worth while. *Vinicolor*, *laurentia* and *chrysophoenicia* were especially attractive to me. I have had *hexagona* (blue) two forms, *purpurea* and *citri-cristata alba* (Nichols) or Mr. Milliken's white *hexagona* going on three years and I think they make fine garden irises. There is a bloom stalk to each three leaf fans average. I would say that the floral display would be about the same as for the wild blue flag—*versicolor*—in the Northeastern States. I start new plants right after bloom is finished and expect them to have formed a semi-circle of rhizomes by the following bloom time and to give me from six to a dozen blooms. The second year they should give upwards of thirty blooms. I plant them three to four feet apart and find it desirable to start them over again after the second bloom season so that they won't intermingle.

I grow *stylosas* and have had *foetidissima* but have given it up because of the seed coming up all over the place (birds). Gave up *pseudacorus* because it wanted all the food and water from at least a six foot circle of ground.

COMMANDER MONROE, Chula Vista, Calif.

THE LITTLE WIDOW.

“Here and there among the broad-leaved flag Irises appear the long narrow leaves of the Little Widow, *La Vedorina* of Italian gardens, no longer allowed to be an Iris, and obliged even to change her sex and reappear as *Hermodactylus tuberosus*. . . . I love this weird little flower, made up of the best imitation I have



Lilian A. Guernsey

(See page 65)

JAPANESE STENCIL BASED ON IRIS KAEMPFERI

ever seen in vegetable tissues of dull green silk and black velvet—in fact it looks as if it had been plucked from the bonnet of some elderly lady of quiet tastes in headgear. I am fond of picking just enough for a vaseful to stand among other vases holding daffodils; both the sombre Little Widow and the gay bachelor Daffs gain by the contrast.”—E. A. BOWLES, *My Garden in Spring*.

[*Iris tuberosa* referred to in this charming paragraph written from an English garden is declared hardy by Bailey’s Encyclopaedia of Horticulture.—Editors.]

SIR MICHAEL FOSTER AS NONCONFORMIST

Of this plant so attractive to the plant lover, Sir Michael Foster says in *Bulbous Irises*, “It was separated by Salisbury as a distinct genus with the name *Hermodactylus tuberosus*, because the ovary is not as in *Iris*, divided completely into three chambers by three septa or partitions meeting in the middle along the whole length of the organ. The partitions are imperfect, not meeting in the upper part of the ovary, which thus consists of a single chamber, partly divided by the projecting partitions. Otherwise all the characters of the plant are those of an *Iris*; and, since the lack of complete fusion of the partitions of the ovary may occur accidentally in many specimens of *Iris*, it seems unreasonable to lay such stress on this feature. I shall therefore continue to consider it as an *Iris*. But, as I said it is not strictly a bulbous *Iris*; if you dig a plant when the foliage dies down you will find, not a bulb, but an irregular brown *tuber* like a small, hard, deformed potato, the mass being often made up of two, three, or more parts joined together like the fingers of the hand, or perhaps more like the starfish. . . . The plant has one very striking feature: the leaf is four-sided, with a horny point like that of *I. reticulata*; indeed, the difference between the leaves of the two plants is relatively small, and a casual observer might easily confound the two. The flower, again, draws near to a member of the *Reticulata* group, namely, *I. Danfordiae*; the inner segments or standards are reduced to mere bristles, so that at first sight they seem to be absent. On the other hand, the plant betrays its affinities to *I. sisyrinchium*, in the filaments of the anthers being in part of their course united together. We may place side by side with these structural features the geographical distribution of the species.



Lillian A. Guernsey

(See page 65)

JAPANESE STENCIL BASED ON IRIS LAEVIGATA

While the *Reticulata* group, as we have seen, is confined to the east, and the *Xiphium* group to the west, *Iris tuberosa* stretches from almost the extreme west a long way towards the east. Beginning at the west in Southern France, we may trace it through the Riviera, Corsica, Sicily, Middle and Southern Italy, past Dalmatia to Greece and the Grecian Islands, and even to Turkey. So far as I know, however, it is absent from Asia Minor. In width of distribution it is second only to *I. sisyrinchium*, and, like that, is probably a somewhat ancient Iris."

"The sunny side of my small rock-garden has long groups of *Othon-nopsis*, and the wooly-leaved *Hieracium villosum* and Prophet-flower (*Arnebia*) and good stretches of *Achillea umbellata* and of *Iris cristata*, without doubt one of the loveliest among the smaller members of its beautiful family, and of the flowers that bloom in May. This little Iris is only five inches high, and the flowers are two and a half inches across, so that they look large for the whole size of the plant. When placed as it likes best, in a sunny rock-shelf in nearly pure leaf-mould it shows its appreciation of kind treatment by free growth and abundance of bloom. The leaves, at blooming time only four inches high, though much taller afterwards, are in neat flat little sheaves of from three to five, one leaf always taking the lead. The clear lilac-blue of the flower has a daintily-clean look that is very charming, and taken in the hand I always delight in the delicate beauty of the raised and painted ornament of the lower petals. In the middle of the broadest part is a white pool with a strong purple edging; the white turns to yellow, and runs in a lane an eighth of an inch wide down into the throat, between two little whitish rocky ridges. The yellow stripe is also decorated with a tiny raised serpent wriggling down its middle line, and with a few fine short strokes of reddish-brown. —GERTRUDE JEKYLL, *Home and Garden*.

IRIS IN DESIGN

In spite of comment to the contrary, we follow with another example of the use of iris in design, this time from Japan. It is enough that some may sniff, let them. One of the greatest pleasures in gardening lies in seeing and seeing fully. To this end no one can help so much as the artist for he is gifted with a discrimination in seeing that comes only after long years of practice.

Two patterns are shown, designs for stencils used on the common cotton towelling of that country. They are of interest to us in that one is based on *Iris laevigata* and the other on *Iris Kaempferi*. They are of interest to the designer of stencils in that the former shows a typical direct cut producing a silhouette-like pattern and the other an all-over cutting that must be held together with the fine hair mesh that is used to hold together such slender all-over patterns. They are also interesting in that the first shows how faithfully the stencil cutter has carried over the brush lines in his work, while the second shows a more knife-like cutting with sharper more arbitrary edges. By a study of the first pattern, how much one might learn for the preparation of iris for silhouettes, for arrangement so that leaves might be bent to spread away from the flower heads with curves that contrast properly with the angles of the flower itself.

NOTE

At the meeting of the Board of Directors on December 9, 1933, it seemed advisable for the Board to reassume the burden of serving as a committee on Awards as in the past. That Dr. Everett, Messrs. Duffy and Wallace, and Mrs. Hires of the 1933 committee on Awards and Mrs. Peckham and Mr. Wister of the 1932 committee would thus carry on the successful tradition already established seems most fortunate. The above policy incorporates most comprehensively both old regulations and the major recommendations of the 1933 committee to whom we owe so deep a debt of gratitude.

This last year and particularly in respect to this bulletin the Society can appreciate what it owes to certain of its active members. For two issues we have missed notes from Sherman Duffy (I have hopes for October). Mrs. Peckham has been in the throes of moving and the recent loss of her mother prevented the completion of her customary reports even in this delayed issue. Mr. Morrison, who assumed the duties of Secretary on January 1st, was also promoted to the head of his division in the Department of Agriculture on the same date. We congratulate him but also bewail the fact that, with an almost impossible burden of new organization in his office both the Iris Society and the American Horticultural Society must find him so irritatingly less active in their interests.

I am glad that I can promise less delay for the July BULLETIN. Its subject is California and I hope that you will like as well as I the work of my Associate Editor, Mrs. Lothrop. Copy, by the way, goes to the printer by June 10, so that may expect it shortly.—EDITOR.

April, 1934.

OUR BULLETINS

With the selection of a new printer and a new secretary last year our stock of old bulletins (amount to two tons) was shipped to your editor for storage and such distribution as members might select. Hence make your checks payable to the A.I.S. but send your requests to R. S. Sturtevant, Groton, Mass.

In going over the inventory there are varied numbers of certain issues available due partly to changes of policy as to the size of an addition and partly of course to the quality—the popularity—of certain issues. Nos. 3, 5, 10, 47, 48, and 49 must be held for complete sets (\$25.00) and it seems advisable to hold also Nos. 29, and 34 for inclusion in special sets entitled, Descriptions, Breeders, Beardless Irises, Fertility Records, etc. Prizes and contents of all bulletins will be found in the January, 1933, issue.

BEARDLESS IRISES. Seven BULLETINS, Nos. 11, 17, 28, 32, 34, 40, and 44. 360 pp. Ill. \$3.00. Although it has never been our policy to omit current notes and reports from even special issues devoted to one subject these six bulletins offer probably more than any other source of concentrated information on the Apogons, their many named varieties and their adaptability to varied localities. And each year sees an added interest on the part of members. There are new species from Louisiana and new hybrids from Mrs. Branin and Drs. Berry and Williams in California and from T. A. Washington of Nashville varied hybrids of real beauty. No. 11 published in 1924 was a review and brief description of all known Apogons and included also an article on Sibirica from the pen of Mr. Dykes. In 1930 under the heading of The Wild Garden there were similar notes on all the new species from Louisiana and Nos. 17, 32, 40, and 44 we have noteworthy contributions on Japanese Irises. Prof. Miyazawa is internationally known for his study of this group and Dr. Reed of the Brooklyn Botanic Garden has classified and described them as they are grown both here and in Japan. It is, however, the translation of the Album of Hana-shobu (1920) which has made our BULLETIN known to all English speaking botanists. Again we are to thank Dr. Reed for this contribution and as he still is working with the Irises you may find one of the finest collections in the world at the Brooklyn Botanic Garden.

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All of the dealers listed below are members of The American Iris Society. If you are buying iris for your garden, it should be your particular pleasure to make your purchases from the dealers who have worked with and supported your society. Your officers and directors invite your particular attention to this list. They also ask a favor. When you order, tell the dealer you saw his name in the BULLETIN and do him a favor by not asking for a catalog unless you mean business.

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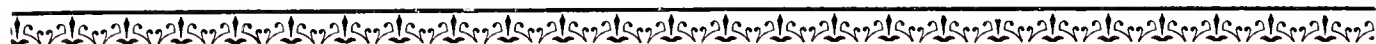
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The American Iris Society



ALTHOUGH ALL READERS of the BULLETIN are supposed to know that the annual dues of the Society are three dollars payable by the calendar year, it has been called to our attention that there is a chance that someone who is not a member may read your copy and wonder how he too may become a subscriber. It is for that reader that this last page has been added. If you happen to be such a reader, let us assure you that the Society welcomes to membership all persons who are interested in iris who feel that special knowledge of iris would be welcome in their gardening.

Make your check or money order payable to the American Iris Society and send to Mr. John Ferguson, Monumental Printing Company, 1918 Harford Ave., Baltimore, Md. Please follow this instruction. It will help us all in the record keeping.



BULLETIN
OF THE
AMERICAN IRIS SOCIETY

JULY, 1934

CALIFORNIA GARDENS

NO. 52

Editor, R. S. STURTEVANT
Associate Editor, LENA M. LOTHROP

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COMMENT AND REMARK

■ Largely by force of circumstances I have been editor since 1920. There were almost four years of monthly pages in *The Flower Grower* and this is our 52nd BULLETIN. With very few exceptions I have had the doubtful pleasure of collecting material, contributing material, preparing it all for the printer, and proof reading it at least twice. Of recent years my associate editors have assisted nobly and especially in the collection of material.

The average member seems to think that an editor "selects" material. In this case he often solicits it and, as in the last issue, must often reprint articles from other publications. Of what he receives, the acceptance is "99 per cent pure" (except it be poetry of which he is no adequate judge). Hence when you wonder why so and so appears so frequently in print, ask yourself "Have I written *and sent* anything at all?"

Like the theory that we "select" contributors and material, is an even finer one, that of *regular, regional* reports. Regional Vice-Presidents have been with us from the beginning. Perhaps one in ten has made any sort of an annual report. Can one expect more of a member or even an associate editor than of an officer? As a matter of fact even among the accredited judges, our most experienced and loyal members, rarely do more than 50 per cent fulfill their accepted obligations.

I regret that I have no report of the Lincoln meeting. There are, however, rumors of a good time, rumors that numerical ratings are losing favor, rumors that we need zonal ratings rather than country wide averages. Again an excellent theory but when no originator *or introducer* can rate his own—well—there are practically no other accredited judges available in many localities to give the total of five or seven ratings required. Both the breeder and the grower stand, or fall, by their introductions and they know their varieties while I visit and judge (in five minutes). What know I of special culture, of weather resistance, rate of increase, or *average* performance and yet my judgment is to be counted and theirs not. We need the judgment of *every experienced* breeder and grower on every variety *even their own*.

THE EDITOR.



EASTER MORN

A warm white from the yellow side of the color scale. The large flaring falls are notable

TWELVE YEARS OF INTENSIVE IRIS BREEDING IN CALIFORNIA—METHODS AND RECORDS

EDWARD O. ESSIG

■ In 1922 I first became interested in irises and decided to collect a representative lot of commercial varieties in order to undertake hybridization. This adventure was wholly independent of any outside influence since I did not know a single iris grower or breeder and had no knowledge of the American Iris Society or anyone who knew irises. But having been reared on a farm I did know something of plant culture and this fact strengthened my desire to experiment in this particular type of original research work. Accordingly, catalogues and price lists were soon obtained. These were followed in a few weeks by a collection of some fifty common, well known varieties from the east and the northwest. Shortly afterwards, too, I learned that a colleague and neighbor, Sydney B. Mitchell, was an authority on irises and that he had a splendid collection of novelties and new creations. A trip to his garden in iris blooming season gave me one of the greatest thrills ever experienced. Up to this time only the common white and blue flags had been seen in culture and the common native California species under natural conditions. In the Mitchell garden were irises never before dreamed of by the writer: *plicatas*, *variegatas*, *amoenas*, yellows, pink-toned hues, blends, and various other unusual color combinations. It was as if walking into a new world, and, being truly impressed and enthused, I decided at once to secure all of the varieties obtainable. As a result there were assembled that first year about 300 varieties. The following spring (1923) there was a creditable showing of flowers and hybridization was begun on a large scale. Every single flower was cross-fertilized. No pains were spared to test every variety, not only once, but many times. That first year more trials were made than in any succeeding season, it being fully expected that the major portion would prove futile. As a result there arose from the iris plants a forest of seed stalks and pods. Visitors marvelled at the sight, for few, if any, had ever seen irises in seed before. Great pleasure and satisfaction were gained in watching the progress of growth from day to day. Even in spite of the many hints that seed pods do not necessarily mean seed—a truth which has been learned thoroughly,

—there was a joy in watching the green pods take on shape and size. Approximately 1,000 crosses were made of which 392 produced seed-bearing pods of a great variety of shapes and sizes. Some were the size of small cucumbers, the largest measuring about 5 inches in length and 2 inches in diameter. After properly drying the pods in the sun the seeds were carefully counted and put up in small envelopes for planting. The greatest number of seeds from a single pod was 102, but the average per pod was 17+. Many of the pods were very small and contained only 1 or 2 seeds. From these crosses 6,854 seeds were obtained. Each pod represented an individual cross, both parents being known, and was given a serial number, and all of the seedlings resulting from the same were designated by that number. Outstanding individual seedlings, reserved for further tests, were also given a letter as 1A, 1B, 1C, 2A, 2B, 2C, etc. Since no more than a dozen of any single cross were ever retained after the first blooming season there was never any embarrassment for lack of letters in any given series.

POLLINATION

In cross-pollination great care was exercised to avoid mixing the pollen. The entire stamens or anthers were removed, contained in small pill boxes, and properly labeled as to variety. In applying the pollen the anther was held in a pair of forceps and the pollen surface drawn across the lip of the stigma in such a manner as to leave the entire surface of the latter completely covered. From one to three or more anthers may be necessary to supply pollen for a single flower. Mixed pollen was never used, although it would seem possible to get a greater variety of combinations by such a practice. It was felt that continued progress could be made only when all of the parental factors were exactly known and I think the soundness of this idea has been borne out by experimentation. A small white cardboard tag, bearing the name or number of the pollen parent, the date, and other pertinent information regarding the character of the seed plant or flower, the pollen, or the weather, is attached to the stem of the fertilized flower. Every flower may be pollinated on a single stalk and all may produce seed, but it is better not to over tax the stalks, but rather to limit the number of seed pods to three or four to each. There is a vast difference in the character of the pollen and the stigmatic surface, or lip, in different hybrids. Pollen may be abundant, soft, fluffy, and readily applied, or it may be hard and almost impossible of removal from



IRIS ALBICANS LANGE, 1860

This fragrant white iris is commonly grown in the milder regions of this country and the old world. It is native of the Mediterranean regions, where it has been extensively planted in the cemeteries of the Arabs and the Moors. It grows well in California but repeated attempts to cause it to produce seed failed. It blooms early, the photograph being taken on March 3, 1923.

the anther. In a great many flowers there is no pollen at all, which deficiency is often a distressing thing in continued breeding experiments. Soft, fluffy pollen is readily removed by rubbing the anther across the stigma, but in the case of hard pollen it is often necessary to press out the mass on the surface of the anther before applying it to the stigmatic surface. Experimentation has shown that both kinds of pollen are fertile and will produce seeds, but of course apparently all types fail with certain sterile flowers. A small soft brush may be used to apply the pollen, but it is much quicker and more satisfactory to follow the above directions. Much has been said and written as to the proper time for applying pollen,

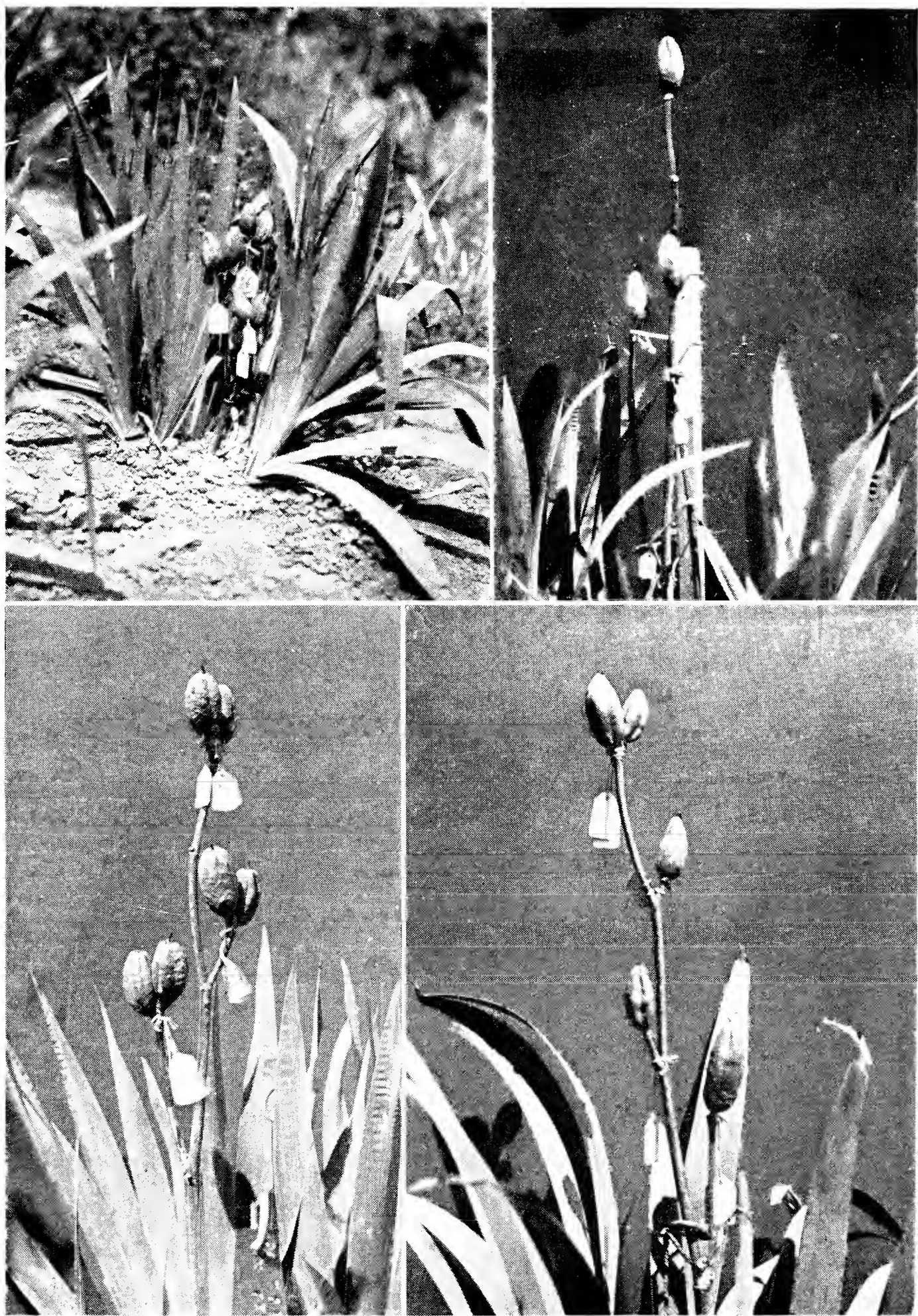
but my records show that success is possible almost anytime after the flower opens and as long as the stigma remains in good condition, even though the standards and falls have begun to wilt. A slight injury or even a split in the stigmal lip seems to offer no serious difficulties in fertilization. However, I prefer to apply the pollen soon after the flower completely opens. Rarely the pollen may require a day or more to properly mature after the flower opens, but this is the exception. More often it is best a few hours after the flower unfolds. Pollen has been kept in open pill boxes for over a month without apparent deterioration, but the exact duration of viability will probably have to be ascertained for each type of variety.

As to the proper condition of the weather for cross-pollinization, there is little to say except that it appears to make no difference. Experiments were made on dull cloudy or foggy days, during cold, rainy and windy periods of considerable duration, as well as during all sorts of warm, sunny weather. Success was obtained under all such conditions. Naturally one prefers the forenoon of a bright, warm day for such work. Then the garden is at its best and the hybridizer is in his paradise. Under such auspices the crosses should be more successful for it is then that the bees choose to serve nature in a similar way. It is not at all necessary to mutilate the flowers in any manner since the removal of the anthers is no wise disfigures them. It is often necessary to make a great many crosses to insure a few seeds so that in such cases one should utilize every flower of a desirable new parent.

In California few insects visit the iris flowers to gather pollen and nectar so there is little chance of natural cross-fertilization. Therefore it is unnecessary to bag the flowers after the pollen has been applied. Bagging, too, has the disadvantage of affording protection to aphids which seriously injure the seed pods.

CARE OF THE SEED PODS

Aside from cultivation, fertilization, and irrigation some attention should be given the developing seed pods. Each flower stalk should be staked as soon as pollination has begun. The tags indicating the pollen parents are usually attached to the flowers just above the ovaries. When the flowers dry up the tags remain attached to the fragile dead portions and must then be removed and attached at the base of the young seed pod where it is secure until harvest. Rarely the string of the tag may almost sever the



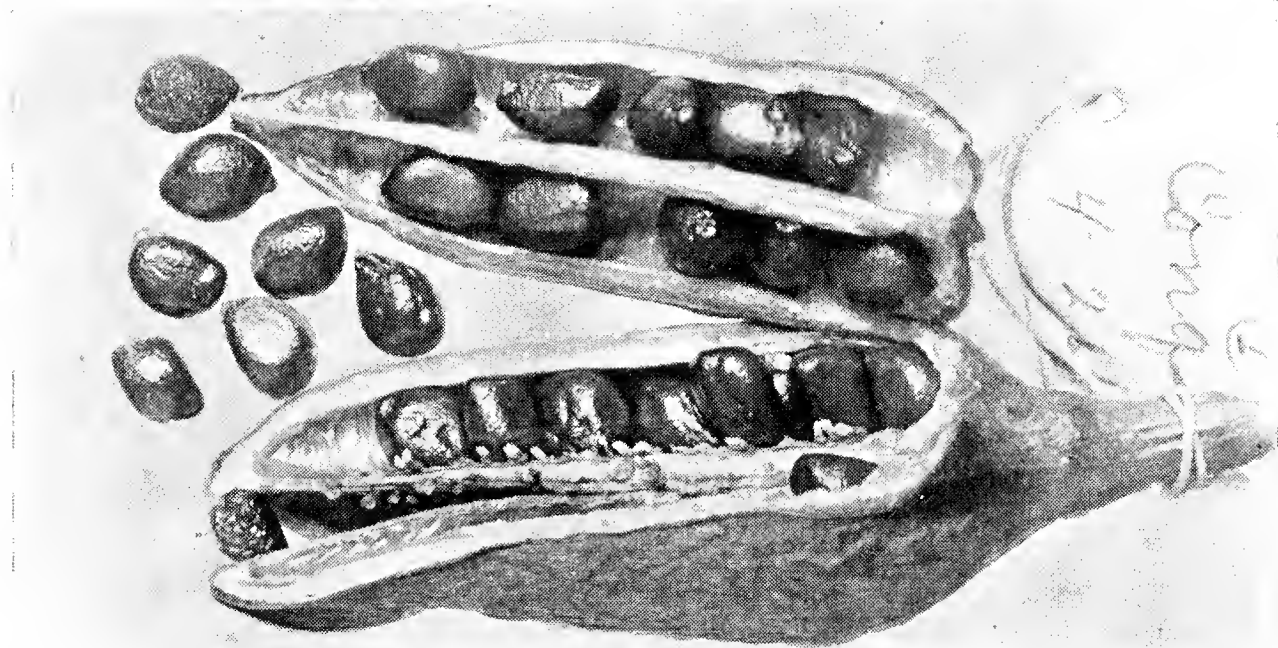
Rialgar (upper left). From six seed pods, 50 seeds were produced, none germinated. *Purissima* (upper right). From this stalk 138 seeds and 24 seedlings—a dependable seeder, but produces no pollen here. *Avalon* (lower left), with six pods that yielded but 22 seeds and 6 seedlings. *Juniata* (lower right), much used by Wm. Mohr in early work, with *Mesopotamica* gave *Conquistador*. The above pods produced no seeds.

enlarging pod if carelessly tied about one end of, or the middle of, the ovary. The remnants of the old withered flowers should be removed as soon as dry, because during continued wet weather they may be the starting point of rot which may subsequently also attack the pod. The old skin-like spathes should also be removed since they afford a hiding place for aphids that often collect there in sufficient numbers to cause serious injury to the pods. Aphids also collect under the bases of the leaves in the leaf axils and forks of the stems, making it advisable to remove all of the leaves from the upper half or two-thirds of the flower stalks. Such removal of leaves in no wise appears to injure the stems and may often also prevent fungus attacks and complete destruction before the seeds are ripe. This care of the pods is one of the most interesting and important features of seed production.

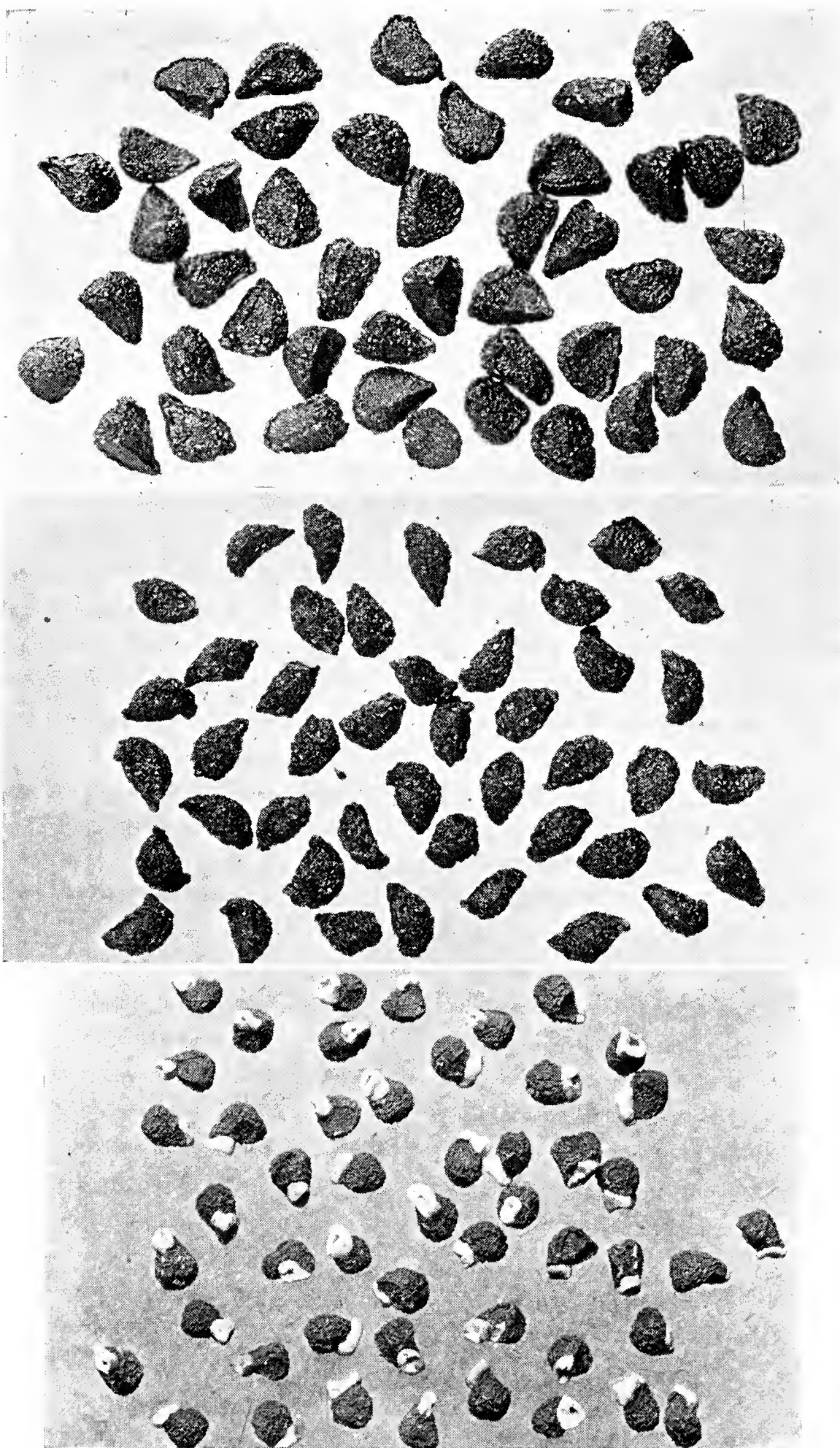
In California almost exactly three months are required to mature the seeds after pollination. When the pods begin to split at the apex, exposing the seeds, they are ready for harvest. It is a simple matter to break them off and place each one, with the accompanying tag, in a small paper bag, on the outside of which is written the name of the seed parent and the date of harvest. The bags are arranged with the open ends up in shallow boxes or trays and placed in the sun to dry. Two or three weeks are required for this process. For convenience in planting the dry seeds are then transferred to small envelopes, 2 x 3 inches, on each of which is written all of the necessary data, including the names of the seed and pollen parents, date of pollination, date of harvest, together with the number, size, shape, quality, and other peculiarities of the seeds. As soon as all of the lots of seeds are thus prepared they are serially numbered and ready to plant. For the past ten years all of my iris seeds have been planted either on Labor Day or on Admission Day (September 9th). At first two or even three days were required to plant: now usually one day suffices.

SEED BEDS

Iris seeds are planted in flower pots, cans, trays, flats, hotbeds, cold frames, and the open ground. The writer prefers a cold frame, the construction of which is illustrated in the accompanying photographs. The frame is made of 1 x 12 clear redwood, usually 14 to 16 feet long and 3 feet wide. The bottom is covered with $\frac{1}{2}$ inch hardware cloth and the top is fitted with a movable frame of 1 inch galvanized chicken wire. The frame of the bed is only par-



Seed pod of Alcazar X Tamerlan (top) ready to harvest. This pod with 78 seeds harvested Sept. 22, 1924 from pollination June 20. It contained 78 seeds. Freshly-harvested seeds (center) of Alcazar X Tamerlan. Some think that planted in this condition, they give quicker germination and faster growing seedlings. A seed pod with 42 seeds of Trosuperba X Conquistador (bottom) showing seed at harvest. Pollinated April 24, photographed June 25, 1924.



Dried seeds of *Mesopotamica* × *Mme. Cheri* (top). Of flat angular type. Seeds show certain relationships and are an aid in determining parentage. These 45 seeds gave 17 plants. *Ambassadeur* × *Oriflamme* (center) rounded-elongate in shape. 47 seed gave 12 plants. Dried seeds of *Iris stolonifera* Maximowicz, 1880. (*Iris leichtlini*) characteristic of seeds of *Regelia* and *Oncocyclus* Sections.

tially buried and the soil inside is elevated 4 to 6 inches above the ground level to insure proper drainage. Our heavy adobe soil is well mixed with sand and river peat to insure proper texture and water-holding capacity. A small quantity of bone meal or well-rotted, sifted cow-manure is added. A small amount of fertilizer is beneficial in spite of the common claims that none whatever is needed. The mixing is done while the soil is dry. After packing and irrigating the ground, the seeds are planted $\frac{1}{2}$ to 1 inch apart and from $\frac{1}{4}$ to $\frac{1}{2}$ inch deep in rows 3 to 4 inches apart, covered, and packed firmly with a block of wood 2 x 4 x 12 inches. Experiments were made using a mulch covering of Delta peat, German peat, sand, screened well-rotted cow manure, sheep manure, finely chopped straw, lawn clippings, sphagnum moss, leaf mold, and coarsely woven burlap. All of these appeared to be marked improvement over the bare soil, in that they prevented the formation of a dry, hard crust during hot weather and a growth of moss during the winter months. The use of lattice and cloth screens over the beds made watering more laborious and appeared to add little in hastening the germination of the seeds and the subsequent growth of the plants. From the time the seeds are planted until the young plants are transplanted the beds are never allowed to dry, but are regularly watered once a day for months, or until the winter rains set in. After the seedlings are removed the following spring the beds are then usually allowed to dry out for several months after which they are either remade and replanted, or, if to be retained for another year's germination, watering is resumed in September or October. At first the beds were remade only after four years had elapsed, and some seeds germinated every year. The first year yields the greatest number of seedlings, although in certain crosses, the larger number of seeds germinate the second year from planting. Only a comparatively few seedlings appear in the third and fourth years. Because of lack of room the beds are usually retained but two years before they are remade and replanted. In remaking the beds the top two or three inches of soil are removed to eliminate any remaining viable seeds and the soil is dried, thoroughly worked, and the necessary amounts of sand, peat, and fertilizer added. The soil is then well watered before planting, but this is for convenience only. Some hybridizers broadcast the seed in small, narrow strips in the beds, but I prefer to plant them in rows to avoid any possibilities of the seedlings being mixed.

TREATING THE SEEDS PRIOR TO PLANTING

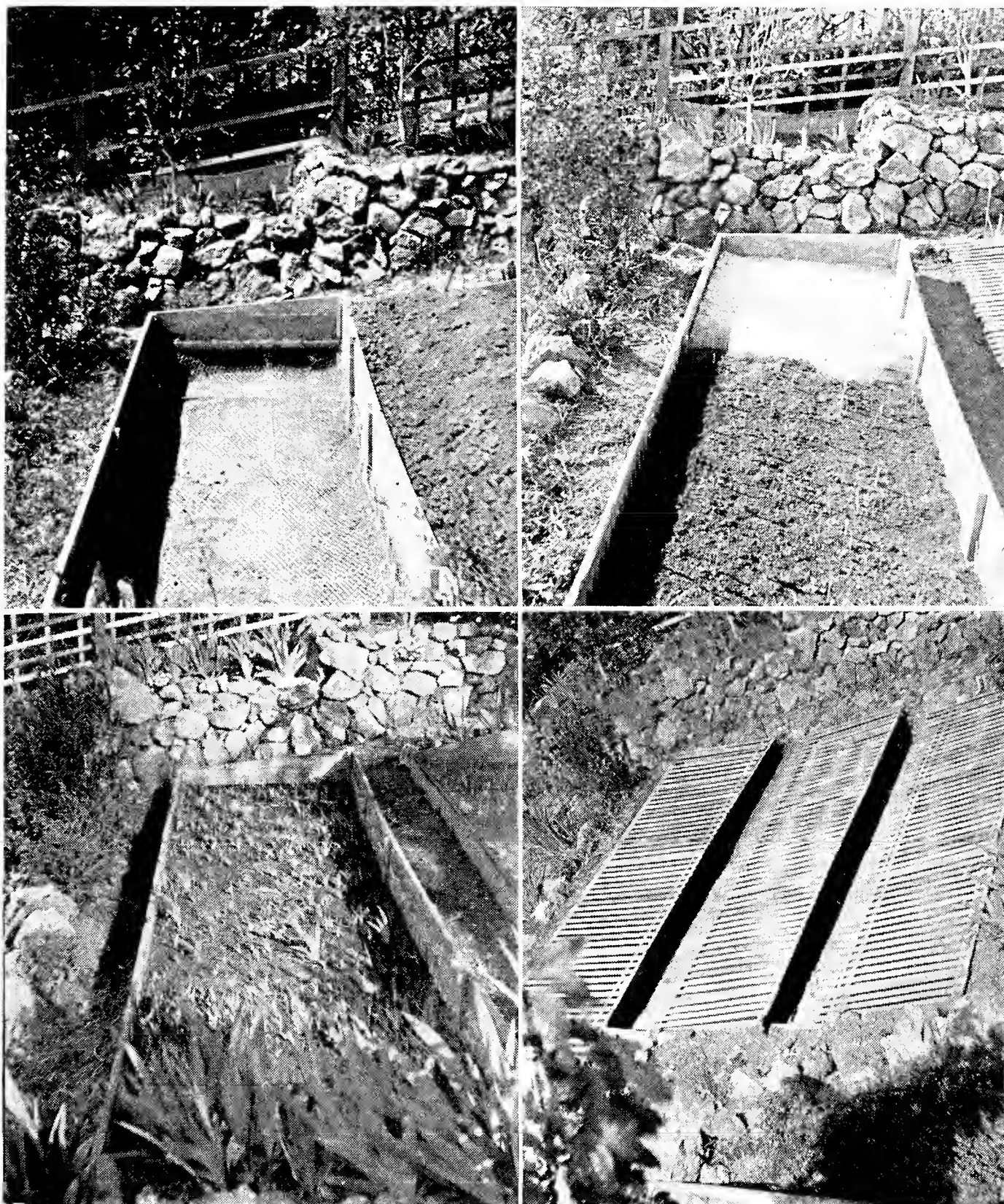
Iris seeds are slow of germination and much time could be saved by hastening the process. Delayed germination is probably due to the thick, impervious coating or skin and the very hard texture of the seed itself. To overcome these natural characteristics many suggestions have been offered such as rupturing the outer seed coat, treating the seeds in acids to destroy the coat, and planting the seeds before they are allowed to harden. A number of experiments were performed to determine the normal periods of germination and if possible, also, a practical and effective method of insuring quick and sure germination. Some of the results secured are given in the following tabulation:

GERMINATION TESTS OVER A PERIOD OF YEARS

Seeds left unmolested in seedbeds until germinated.
The plants were then removed.

No.	Cross	Number of seeds planted	Germination			
			1st year	2nd year	3rd year	4th year
49	Miss Willmott × Sherbert	25	4	21	....	....
226	Mrs. Haw × Eldorado	17	11	6	....	....
244	Oriflamme × Alcazar.....	36	27	9	....	....
245	Oriflamme × Alcazar.....	31	21	10	....	....
247	Oriflamme × Conquistador.....	36	14	12	....	....
334	Trosuperba × Conquistador	39	18	14	....	....
417	Afterglow × Poiteau seedl.	47	17	3	2	....
418	Afterglow × Mohr 20	38	27	2	1	....
419	Afterglow × Opera	25	15	1	1	2
425	Amas × Sherbert	70	30	11	8	4
426	Amas × Sindjkha	58	25	16	3	....
428	Ambassadeur × Conquistador	29	4	7	1	1
431	Ambassadeur × Gaudichau	27	6	....	2	....
437	Ambassadeur × Oriflamme	47	6	2	4	1
452	Balboa × Amas	81	24	41	....	....
453	Balboa × Gaudichau	63	39	8	1	1

Many more experiments along this same line were intended, but the germination after the second year was so poor that it did not seem wise to sacrifice the seedbed space for them.



SEED BEDS IN CALIFORNIA

Cold frame (upper left) to show construction with chicken wire laid double or $\frac{1}{2}$ inch hardware cloth to keep out gophers and moles. Seed bed planted (upper right) mulched $\frac{1}{2}$ inch sand to prevent hard crust and maintain proper moisture conditions. Young seedlings (lower left) from seed planted September 9, 1924, photographed March 25, 1925. The iris in the foreground are old plants. Three seedbeds (lower right) covered with lattices to aid germination.

SEEDS PLANTED BEFORE DRYING

The seeds were taken from the green pods as soon as harvested and planted before drying and hardening took place.

No.	Cross	Condition of seeds	Number planted	Germi- nation 1st year
1073	Sundew × Sitka	Pale plump	17	5
1074	Sundew × Sitka	“	58	9
1075	Sundew × Sitka	“	58	19
1076	Sundew × Sitka	“	32	8
1077	American × Modoc	“	4	1
1078	Hollywood × Sitka	“	30	6
1079	Hollywood × Sitka	“	56	7
1080	Sitka × Nichols' S-476	“	1	0
1081	936A × 871A	“	22	6
1082	945B × Grace Sturtevant	“	53	19
1083	Grace Sturtevant × 859B	“	92	39
1084	Hollywood × 931C	“	66	19
1085	Hollywood × 875B	“	43	9
1086	Sundew × Sitka	“	57	19
1087	Sundew × Dolly Madison	“	67	16
1088	845B × 871A	“	37	5
1089	847B × 855B	“	53	18
1090	Sitka × Gold Imperial	“	21	3
1091	875B × 826A	“	35	6
1092	888A × 871A	“	38	8
1093	931C × Grace Sturtevant.....	“	59	28
1095	875A × Sitka	“	51	30
1097	Blue and Gold × Yosemite Falls....	“	38	3
1098	Blue and Gold × 938B	“	41	2
1096	American × Grace Sturtevant	nearly dry	41	16
1101	Hollywood × Sitka	“	46	30
1104	Sitka × self	fresh	50	35
1105	Sitka × 931C	“	51	36
1106	Sitka × 859B	“	31	25
1107	Pale Moonlight × Dolly Madison....	partly dry	73	30
1110	941A × Yosemite Falls	“	24	14
1112	875B × Grace Sturtevant	fresh	42	32
1113	875B × Yosemite Falls	“	36	18
1115	American × Sitka	“	49	32
1116	American × Blue and Gold	“	50	43
1117	American × Modoc	“	37	19
1118	American × Grace Sturtevant	“	41	22



Group of young iris seedlings. The seeds were planted September 9, 1923, the seedlings transplanted May 10, 1924, and the photograph taken August 10, 1924. California Blue came from this particular lot.

PRE-COOLED AT 42° F BEFORE PLANTING

Dry seeds in refrigeration from September 9 to September 23, 1928

No.	Cross	Number of seeds treated	Germination	
			1929	1930
919	1881 × self	42	20	3
927	398A × Dominion	43	7	8
930	398A × 400C	68	33	10
940	399A × Moa	39	12	12

Seeds in refrigeration from August 30 to September 20, 1929

No.	Cross	Seeds treated	Germination	
			in 1930	
877	175A × 859B	11	3	
979	175A × 189D	47	6	
980	175A × 189D	35	1	
981	175A × Primrose	2	0	
982	183B × 859B	1	0	
983	183B × self	3	0	
984	398A × 850A	33	11	
985	399A × 858A	46	15	
986	399A × 858A	63	31	
987	399A × 859A	44	20	
995	175A × 607D	32	1	
996	841A × 189D	15	8	
997	849A × Grace Sturtevant	30	1	
998	849A × 859B	20	5	
999	858A × 859B	44	10	
1000	858A × 189D	63	17	
1001	859A × 399A	36	18	
1102	859B × 183B	5	4	
1003	859B × Sitka	52	17	
1004	859A × 858A	41	12	
1005	859A × Gold Imperial	3	1	
1006	859A × Modoc	28	11	
1007	859A × Modoc	16	10	
1008	859A × Grace Sturtevant	20	0	
1009	860B × Modoc	35	10	
1010	870A × 400A	17	1	
1011	877A × Grace Sturtevant	47	8	
1012	877C × Gold Imperial	2	0	
1013	878A × 850A	12	2	
1014	Ahwahnee × 859A	15	5	
1015	Chalice × Firefall	6	0	
1016	Citronella × Pink Lass	6	0	

No.	Cross	Seeds treated	Germination in 1930
1017	Eldorado × self	5	0
1018	Gold Imperial × 841B	17	1
1019	Gold Imperial × Sitka	1	0
1020	Gold Imperial × Sitka	2	0
1021	Gold Imperial × 859C	30	0
1022	Gold Imperial × 189D	2	0
1023	Gold Imperial × 859B	20	3
1024	Modoc × 858A	46	6
1025	Modoc × 859A	50	20
1027	Modoc × 859A	44	7
1042	Pink Lass × Rosultra	41	16
1043	Primrose × 189D	35	22
1044	Primrose × Easter Morn	1	0
1045	Purissima × Easter Morn	53	23
1046	Purissima × 607D	40	12
1047	Purissima × New Albion	71	19
1048	Purissima × 189D	53	18
1049	Purissima × 189D	57	18
1050	Purissima × 189D	45	10
1051	Purissima × 189D	1	0
1052	Sundew × Modoc	46	7
1053	Sundew × Iris King	2	0

Due to the poor quality of these seedlings the beds were remade after one year.

SEEDS KNICKED

Seed coat cut with knife and seeds planted October 3, 1924

No.	Cross	Number of seeds treated	Germination	
			1925	1926
750	Dalila × Trosuperba	5	0	0
751	Primavera × Alcazar	10	6	2
752	Primavera × Alcazar	41	9	10

This method did not seem promising and was discontinued.

X-RAY TREATMENT OF SEED PRIOR TO PLANTING

Treated September 21, 1928. Planted September 24, 1928.

Seeds were dry when treated.

No.	Cross	Number of seeds treated	Treatment	Germination	
				1929	1930
903	Purissima × 797A	49	5 milliamps 5 minutes 20 K V	1	4
924	398A × Cardinal	59	7 milliamps 10 minutes 40 K V	12	11
929	398A × 400C	53	8 milliamps 15 minutes 60 K V	15	10
947	400C × Bruno	21	10 milliamps 20 minutes 75 K V	0	0

LARGEST NUMBER OF SEEDS PER POD AND GERMINATION OF SAME

No.	Cross	Number of seeds in a pod	Germination in one year
398	Alcazar × Gaudichau	71	17
400	Alcazar × Gaudichau	86	14
401	Alcazar × Gaudichau	78	16
403	Alcazar × Gaudichau	90	14
469	Caterina × Gaudichau	73	37
582	Lord of June × Sherbert	71	26
602	Mme. Cheri × Conq. × Parisiana	71	39
604	Mme. Cheri × Gaudichau	72	27
606	Mme. Cheri × Gaudichau	77	31
651	Nancy Orne × L. A. Williamson	72	20
655	Nancy Orne × Mohr 41	83	25
749	Alcazar × Tamerlan	71	14
1036	Modoc × Grace Sturtevant	80	4
1037	Modoc × Grace Sturtevant	70	7
1047	Purissima × New Albion	71	19
1065	Grace Sturtevant × 938A	77	40
1145	931A × Dolly Madison	78	69
1185	China Lantern × Eastern Morn	71	43
1186	China Lantern × W. R. Dykes	73	50
1221	963B × W. R. Dykes	75	47

The seeds which were pre-cooled were placed in petri dishes, kept moist, and left in the refrigerator for 15 days at a temperature of 38° Fahrenheit. Several of these lots, planted in September, 1933, show splendid germination at this writing (May, 1934), but as a whole they appear to be little or no better than those handled in the ordinary manner. From all of the evidence at hand so far none of the above experiments appear to have been of material value in securing either quicker or more complete germination of the seeds. Perhaps more striking results may be secured in the future along similar or entirely different lines. It might be noted here that some workers have apparently had marked successes with certain methods. Clarence White of Redlands, California, informs me that he gets decidedly better germination and faster growing seedlings by planting the seeds taken fresh from the pods just as soon as they are in condition to pick.

It should also be noted that seeds germinate from pods which appear to be far from being fully mature. This has been noted in several cases where the pods were accidentally knocked off the stalks when they appeared to be but little more than half mature. In several cases also the pods were harvested before the ends began to crack and while the seeds were still green or whitish and before the brown color began to appear. In all such cases a good germination was had.

TRANSPLANTING AND CARE OF SEEDLINGS

In California the seedlings should be transplanted in May or June at which time they have attained considerable size, 6 to 12 inches tall. In order not to unnecessarily disturb the seeds which have not yet germinated care must be exercised in removing the young plants from the seedbeds. This is accomplished by first thoroughly watering them and then inserting the trowel beneath the roots and lifting the soil sufficiently to loosen the plants, which can then be pulled up with clean roots, thus leaving the soil in place. The plants are then set out in well-prepared soil in rows 1½ to 2 feet apart—the plants 8 to 12 inches apart in the rows. Obviously more can be expected in the growth and development of the plants if they are given plenty of room, but I have always had to crowd my seedlings in order to fit the restricted space available. I would prefer to have the rows 3 feet apart and the plants 18 inches distant in the rows in order to allow for plenty of space when the plants are mature. It is not a good practice to

transplant very small seedlings 2 to 4 inches in height in the open ground, because they recover very slowly from the change. It is far better to allow them to remain in the seedbeds, or other containers, until they have attained sufficient growth, after which they appear to be little inconvenienced by transplanting.

Frequent irrigations and cultivations are necessary in California to promote the best conditions of growth. Under favorable conditions seedlings frequently bloom in October, November, and December or 14 to 16 months from the time of planting the seeds. On an average, from 50 per cent to 75 per cent of all seedlings bloom the following spring, 18 or 20 months from seed, or almost exactly 2 years from the time the flowers were pollinated. In order to make room for the more promising ones the undesirable seedlings are removed and discarded as soon as the first flowers appear. By this early removal much labor and confusion are avoided. Pollination of the new and promising hybrids begins with the appearance of the first blossoms, which makes it necessary to leave the seed bearing plants in their original positions until the seeds are harvested. They may then be lifted and segregated as clumps; they may be divided in the usual manner; or they may be left undisturbed for another year. The greatest increase usually follows the latter method for the first year, whilst over a period of two or three years more and better plants may be produced by dividing and transplanting as soon as possible.

DIVIDING AND TRANSPLANTING OFFSHOOTS

Well established plants may be lifted, divided, and transplanted at almost any season, but most iris growers agree that the best time is immediately following the blooming period. The production of seed delays this process and materially affects the increase of those plants used for breeding purposes. Briefly, the process consists in digging up the old plants, shaking off the soil, separating the rhizomes, cutting back the tops, and then setting them out in properly tilled and fertilized soil. For immediate transplanting the roots need not be disturbed at all, but should be allowed plenty of room in the ground. As a matter of fact, the offshoot is set sufficiently deep to just cover the rhizome and no attempt is made to accomplish the remarkable feat of allowing the rhizome to rest on the soil "like a duck on the water."

The old, spent rhizomes are discarded. The small offshoots or

eyes may be reset if desired, since they make very good plants in one year.

The arrangement of irises in a garden is a matter of taste. A satisfactory method appears to be to plant the different varieties in groups in regular or irregular beds, and avoid, if possible, rows and long continuous borders. Thought may be given to the harmony of color and size so that blendings or contrasts be emphasized. Thus whites, creams, yellows, blends, reds, lavenders, etc., may be arranged close together, or such sharp contrasts as yellows and the darkest purples may be placed together to emphasize color quality. Similarly, small varieties may be set in front of taller ones to give the proper balance in the garden. As a matter of fact there are few problems in adapting irises to the garden. Because of their soft color tones, harmony is produced with almost any sort of arrangement of varieties, but it must be also said that much can be done by judicious selection and combinations should be carefully studied and practiced by those who seek the best results.

SOME RESULTS OF HYBRIDIZATION

So much has been said and written regarding the value of certain varieties as seed and pollen parents that it has been thought wise to tabulate some of the writer's results of iris breeding in California. It might be said that seasonal influence on seed production appears to be quite definite, since some years are very much better than others. The critical time is during pollination, for after the seed is once set no further difficulties are usually encountered in this area. Some varieties which could not be pollinated one year set seed well the next with the same kind of pollen. I am calling attention to this situation, because a variety may produce seed well in one locality and fail in another.

Only named varieties are included in the table, although of late years unnamed seedlings have figured excessively in the crosses.

POLLINATION AND GERMINATION RECORDS, 1923-1933

Only the crosses which set seed are included in this list

Name of variety	As seed parent			As pollen parent		
	Number of crosses	Seeds produced	Number of crosses germinated	Number of crosses	Seeds produced	Number of crosses germinated
A. E. Kumerd	1	6	0	1	19	19
Afterglow	8	203	124	3	49	19
Ahwahnee	2	38	13	1	69	18
Albert Victor	6	86	0	2	22	2
Alcazar	38	2186	652	24	559	370
Amabilis	2	14	0	1	3	0
Amas	9	597	307	35	948	325
Ambassadeur	28	660	105	....	....	....
American	7	248	142	1	60	46
Anna Farr	2	25	2	3	29	14
Archeveque	3	15	11	4	77	23
Argentina	2	98	28	15	482	110
Avalon	6	93	10	6	79	33
Balboa	5	252	161	....	....	....
Ballerine	2	6	0	....	....	....
Black Prince	4	4	1	....	....	....
Blue and Gold	2	79	5	3	170	69
Blue Jay	4	7	0	....	....	....
Brooklyn	3	23	3	....	....	....
B. Y. Morrison	2	4	1	4	53	11
Bruno .....	....	....	....	14	579	155
California Blue	23	977	460	24	863	294
Caprice	8	102	24	....	....	....
Cardinal .....	....	....	....	11	463	188
Caterina	35	1477	590	23	518	64
Chalice	5	25	5	....	....	....
Chelles	9	38	1	....	....	....
Chereau	7	49	2	1	6	0
China Lantern	3	225	131	5	159	71
Citronella	5	40	0	....	....	....
Claridad .....	....	....	....	1	51	20
Conchita	1	9	0	3	17	0
Conquistador	6	268	223	34	1115	565
Coronado .....	....	....	....	1	3	0
Crepuscle	2	17	2	8	68	30
Crinoline .....	....	....	....	1	52	12
Crusader	8	371	207	8	182	40
Dalila	3	32	7	....	....	....
Delicatissima	1	30	0	....	....	....

Demi Deuil	7	31	0	1	15	1
Dejazet	1	43	35	....	....	....
Diablo .....	....	....	....	1	24	16
Dorothy K. Williamson	1	32	5	1	55	0
Dolly Madison	3	87	19	10	517	334
Dominion	1	53	2	11	460	216
Dorothea	3	8	1	....	....	....
Dr. Bernice	1	3	0	....	....	....
Dream .....	....	....	....	1	1	0
Edouard Michel	2	13	1	5	310	108
E. L. Crandall	6	241	89	....	....	....
Eldorado	23	265	13	11	101	46
Esplendido .....	....	....	....	25	763	315
Fairy	12	161	6	....	....	....
Firefall	7	140	10	2	5	2
Flame Bearer	4	131	72	....	....	....
Flavescens	2	7	2	1	4	0
Florentina alba	1	7	0	....	....	....
Formosa .....	....	....	....	2	44	0
Freida Mohr	2	13	0	....	....	....
Fro	10	40	13	....	....	....
Foster's Yellow .....	....	....	....	2	43	29
<i>fulva</i>	1	55	0	1	32	5
Germanica	3	19	4	....	....	....
Gertrude	5	76	4	....	....	....
Gleam	1	23	0	....	....	....
Gold Crest .....	..	..	..	6	165	86
Gold Imperial	19	176	13	5	38	5
Grace Sturtevant	6	421	114	27	1,258	444
Gypsy Queen	3	161	53	..	..	..
Hector	2	2	0	..	..	..
Her Majesty	11	146	62	..	..	..
Hiawatha	2	2	0	1	25	6
Hollywood	12	511	175	..	..	..
<i>Hoogiana</i> .....	..	..	..	7	34	1
Ibmacrantha .....	..	..	..	1	6	1
Iris King	1	4	0	5	8	0
Isoline ...	11	41	5	2	5	0
Ivory Coast	1	33	26	..	..	..
Jacquesiana	3	12	0	..	..	..
Jeanne d'Arc	6	47	20	..	..	..
Juniata .....	..	..	..	2	28	8
Kashmir White	7	216	89	9	85	0
Kochii	6	55	15	1	8	1
Lady Foster	4	145	84	15	423	158
Lent A. Williamson.....	3	103	12	17	729	413
Liberty	27	324	18	13	121	52

<i>Leichtlini</i>	20	100	0	..	..	..
Lohengrin	23	562	102	1	31	23
Lord of June.....	6	279	181	6	105	55
Loreley	14	61	7	1	3	1
Louis Bel .....	..	..	..	3	67	31
Loute	1	1	0	..	..	..
Magnifica	3	89	54	28	620	164
Mareschal	1	3	0	6	67	16
Marengo	1	5	3	..	..	..
Marian Mohr	6	73	28	21	397	103
Mary Garden	2	5	1	..	..	..
Mauvine	13	324	100	6	164	85
Medrano .....	..	..	..	5	61	28
Menetrier	5	223	49	12	405	88
<i>mesopotamica</i>	9	218	83	34	658	120
Midwest .....	..	..	..	10	147	47
Minnehaha	3	63	27	..	..	..
Miss Willmott	3	104	30	11	326	95
Mme. Chereau	18	263	67	..	..	..
Mme. Cheri	9	487	216	23	587	196
Mme. Durrand	5	22	1	..	..	..
Moa .....	..	..	..	10	429	230
Modoc	17	819	173	6	166	58
Monsignor	10	39	6	..	..	..
Mother of Pearl.....	..	..	..	1	36	15
Mrs. A. Gray	1	6	0	..	..	..
Mrs. Haw	12	211	50	..	..	..
Mrs. H. Darwin.....	7	46	3	..	..	..
Mrs. Smith	2	36	0	3	31	4
Mrs. Valerie West.....	..	..	..	6	301	84
Mt. Penn	10	213	129	6	103	55
Nancy Orne	7	341	107	9	355	162
New Albion	4	178	117	2	49	16
Nine Wells	1	6	4	..	..	..
Nuee d'Orage	3	17	1	1	5	0
Opera	1	37	19	11	139	44
Oriflamme	25	845	676	22	528	154
Ohwahnee	1	29	6	..	..	..
Othello .....	..	..	..	1	2	0
Pacific	1	58	39	..	..	..
Pale Moonlight	2	120	62	1	42	18
Pallida Dalmatica	7	108	11	..	..	..
Parisiana	13	99	73	27	752	299
Pastel Shades .....	..	..	..	1	18	5
Pauline	8	199	35	12	140	51
Perfection	3	5	0	..	..	..
Pfauenauge .....	..	..	..	1	7	0
Pink Lass	2	71	31	1	6	0

Poiteau .. .. .	..	..	..	2	23	12
Primavera	2	51	15	11	246	55
Primrose	2	36	22	3	34	17
Princess Beatrice	3	29	1	..	..	..
Princess Viktoria Luise.....	3	10	2	..	..	..
Prosper Laugier	20	93	15	..	..	..
Prospero	2	82	16	3	78	9
Pumila lutescens .. .. .	..	..	..	2	16	3
Purissima	27	1,014	375	..	..	..
Quaker Lady	2	8	1	..	..	..
Queen Caterina	3	17	0	..	..	..
Queen of May.....	25	525	87	..	..	..
Rialgar	7	59	0	..	..	..
Ricardi Foncé	1	2	0	..	..	..
Rose Mitchell	7	207	92	..	..	..
Rosultra .. .. .	..	..	..	1	41	16
Santa Barbara .. .. .	..	..	..	24	504	177
Shasta .. .. .	..	..	..	2	81	37
Shekinah	2	26	7	2	55	12
Shelford Yellow	1	7	1	..	..	..
Sherbert	7	342	53	25	609	312
Sherwin Wright	1	5	0	1	4	0
Shining Waters	4	198	126	1	61	47
Sindjkha	9	354	125	5	198	101
Sitka	11	486	249	10	378	200
<i>Sofarana</i> .. .. .	..	..	..	1	9	0
Soledad	1	21	7	1	48	10
Souv. de Mme. Gaudichau..	16	1,015	455	56	2,148	911
Sundew	9	377	114	..	..	..
Sunset	14	201	16	..	..	..
Sybil	8	207	68	..	..	..
Tamerlan	17	679	378	20	339	52
Tecumseh	5	53	11	..	..	..
Tenaya	1	22	5	1	25	6
Tinea	1	11	0	..	..	..
Titan	1	20	3	1	38	14
Trautlieb	1	26	7	..	..	..
<i>trojana</i>	2	95	54	3	51	0
Troost	1	1	1	9	158	69
Trosuperba	20	475	297	28	504	66
Turquois	2	9	1	..	..	..
Uncle Remus	2	76	59	5	124	30
Windham	3	32	10	..	..	..
Winneshiek	1	32	8	..	..	..
W. R. Dykes.....	5	127	3	16	767	441
Wyomissing	6	71	14	..	..	..
Yosemite Falls	1	69	18	3	98	37
Zannardelli	2	7	0	..	..	..



WESTERN SKIES

To properly evaluate the amount of work involved in obtaining the above crosses it must be borne in mind that often dozens, or even hundreds, of crosses were made which set no seed at all. These, of course, are not mentioned. All of the unnamed hybrids, designated by number only were also omitted in the table, although many of them were prolific seed producers and were abundantly used in originating some of the new introductions.

It is believed that the varieties listed in the table are fairly representative and will serve to indicate what might be expected by the average hybridizer. A great many other varieties were also tested, but without results. In practically all cases the seeds were allowed to remain in the seedbeds for two years. Had they been left longer the number of plants produced would have been considerably increased.

It will be noted that many of the best seed bearers produced no pollen and, similarly, certain good pollen parents bore no seeds. These deficiencies are indicated by dashes in the table.

These results should not be taken as indicative of what may always occur in California or what may happen in other localities. Many trials over a period of years may reward the persistent worker with seeds and plants from what may appear to be hopeless combinations in the iris field.



ROSE MITCHELL

A pink iris of firm substance as well as other desirable qualities of size, form and vigor.



The disposal of unnamed seedlings is one of the breeder's problems. Quantities have been donated to city parks and other public gardens, but most of them are composted. A general distribution would greatly injure the legitimate sale of desirable new introductions and practically eliminate the retail trade in a community.

CONCLUSIONS

It is obvious that one cannot discuss adequately all of the problems and delights of iris breeding in a paper of such limited scope. This will account for the many omissions which will be apparent to everyone, but which are nevertheless necessary.

In conclusion it might be interesting to know that these years of iris breeding, undertaken purely as an avocation, resulted in making 1,400 successful crosses which produced normal appearing seeds. In all 36,890 seeds were obtained which gave rise to exactly 14,440 seedlings, all of which were brought to the flowering condition. From this vast array of new creations only 34 hybrids¹ were registered, of which three, American, Painted Minx, and Polar Light have not been introduced. In view of the rather limited number of new introductions it seems desirable to list the full ancestry of these chosen few.

¹ The *fulva* and Dorothy K. Williamson hybrids, of which three were introduced, are not included in the above.

ANCESTRY OF REGISTERED HYBRIDS

- AMERICAN (1930) No. 399A. *Alcazar x Gaudichau*.
- BLUE GOWN (1929) No. 23A. *Amas x Conquistador*.
- CALIFORNIA BLUE (1929) No. 247A. *Oriflamme x Conquistador*.
- CHINA LANTERN (1932) No. 963B. (*Conquistador x L. A. Williamson*) \times *Cardinal*.
- EASTER MORN (1931) No. 841B. *California Blue* \times (*Argentina x Conquistador*).
- FIREFALL (1928) No. 226A. *Mrs. Haw x Eldorado*.
- FLAME BEARER (1932) No. 1100. [*Hollywood* \times (*Alcazar x Gaudichau*)] \times (*Mme. Cheri x Magnifica*).
- HOLLYWOOD (1929) No. 267A. *Sindjkha x Magnifica*.
- IVORY COAST (1932) No. 904A. *Purissima* \times (*Trosuperba x Mohr 40*) \times *Menetrier*.
- MODOC (1929) No. 400C. *Alcazar x Gaudichau*.
- MOURNING CLOAK (1933) No. 986B. (*Alcazar x Gaudichau*) \times (*Uncle Remus x Dominion*).
- NEW ALBION (1931) No. 841A. *California Blue* \times (*Argentina x Conquistador*).
- PACIFIC (1929) No. 315A. *Gaudichau x Lady Foster*.
- PAINTED MINX (1930) No. 883A. (*Ambassadeur x Sherbert*) \times *Cardinal*. Not introduced.
- PASTEL SHADES (1931) No. 209D. *Minnehaha x Midwest*.
- PINK LASS (1929) No. 264A. *Parisiana x Conquistador*.
- POLAR LIGHT (1929) No. 331A. *Trojana x Lady Foster*. Not introduced.
- REDGLOW (1933) No. 948A. *Modoc x Bruno*.
- ROSE MITCHELL (1929) No. 693B. *Sindjkha x Conquistador*.
- ROSULTRA (1929) No. 183. *Mauvine x Diablo*.
- SHINING WATERS (1932) No. 976A. [(*Caterina x Marian Mohr*) \times *California Blue*] \times (*Uncle Remus x Moa*).
- SIERRA BLUE (1930) No. 561A. *Gaudichau x Santa Barbara*.
- SITKA (1931) No. 885A. (*Oriflamme x Conquistador*) \times *Shasta*.
- STIPPLES (1928) No. 239A. *Nuee d'Orage x Opera*.
- SUNDEW (1929) No. 409A. *Alcazar x Mme. Cheri*.
- TENAYA (1932) No. 934A. (*Alcazar x Gaudichau*) \times *Cardinal*.
- UKIAH (1933) No. 941A. (*Alcazar x Gaudichau*) \times *Mrs. Valerie West*.
- UNCLE REMUS (1928) No. 253F. *Oriflamme x Gaudichau*.
- WESTERN SKIES (1929) No. 189A. *Miss Willmott x Sherbert*.

WESTLANDER (1933) No. 894A. (*California Blue* x *Louis Bell*) × (*Uncle Remus* x *Moa*).

YOSEMITE FALLS (1930) No. 860B. (*Pallida Dalmatica* x *Ori-flamme*) × *Moa*.

In studying these hybrids it will be noted that they are well scattered numerically. In the list, the number following the name and date of registration, refers to a particular cross or seed pod and it is significant that there are only two introductions, *New Albion* and *Easter Morn*, from the same pod. In many cases there were a number of desirable ones from the same pod and it appears that all are either good, fair, or poor. I have never found a real outstanding individual from a litter of poor ones. It is to be noted also, in the above list, that the more recent introductions have a much more complicated family tree, a circumstance sure to become more involved as the work continues. How far one can go without mere duplication remains to be seen, but it does not seem possible that all of the interesting combinations have as yet been exhausted.



SOUTHERN NATIVES IN CALIFORNIA

F. F. WILLIAMS, M. D., *Patton, California*

■ Ten years ago I became interested in the iris of the southern states. At that time according to Dykes there were only three species in this group; namely—*I. hexagona*, *I. foliosa* and *I. fulva*. The same year Dr. Small of the New York Botanical Garden added two to this number: *I. savannarum* and *I. Kimballiae*, kindly sending them to me shortly after. Dr. Small has continued to send me Louisiana irises and because of his help I have a fairly representative number of the irises he has collected.



J. N. Giridlian

*An unidentified white Louisiana iris just coming into bloom
in Dr. William's garden.*

Many of these I have not continued to grow, either because they were close to, or, for me at least, inferior to others. These iris appear to be particularly adapted to Southern California but they must have the same accommodations they are used to. I make up my soil before planting consisting of peat, garden soil and well rotted barnyard manure,—frequently giving a dressing of pine mould. When well established I give the plants a feeding of commercial fertilizer. Although I have never given them bone meal, I am not convinced that they are adverse to some lime.

In making my beds it is arranged so that the plants can be flooded easily as they all demand more water than any other garden iris. However, it has been observed that the reds or reddish sorts will do well with less moisture than the blues or their albinos.

Oftimes I have had the question raised as to whether there was not too much foliage in proportion to bloom. Such has not been my experience although it has been observed that those of *foliosa* type have a tendency to bear their flowers down in the foliage. It has therefore, been my principle to stay away from *I. foliosa* in all my breeding, even though it does give color that is hard to duplicate. In breeding I constantly breed back to the parents as I believe I get better color breaks by so doing.

Of the species I have so far kept *savannarum* blue and its albino, *elephantina*, *citricristata alba* (?), *chrysophoenicia*, *Thomasii*, *regalis*, *violipurpurea*, *fulva* with its color variations, *pyrrholopha*, *citriviola*, *giganticoerulea* with its color variations, *Albispiritus*, *miraculosa*, *vinicolor*, *fulvaurea*, *fourchiana* and *moricolor*. These all have true garden value.

Although the *laevigatas* are not native species I have found *I. laevigata colchesterensis* and *laevigata* Regel very desirable as they bloom at about the same time and require the same treatment.

Concerning the hybrids of the southern natives all of Mr. Washington's are decidedly desirable. Dr. Berry's Cacique and Sagamore are two of the best. Tulsa, a *foliosa-fulva* hybrid of Prof. Essig's, is rich and interesting. It is of the *ecristata* type, having no crest. All set seed readily and crossing is constantly giving excellent color effects and changes in shape.



J. N. Giridlian

IRIS LAEVIGATA COLCHESTERENSIS IN DR. WILLIAM'S GARDEN

TWO CALIFORNIA SPECIES

J. N. GIRIDLIAN

Iris Hartwegii australis:

Being neither a writer nor a naturalist, I am unable to write an article on our native iris, or tell their history. I am only going to write a few notes on my personal observations and what I have read on the subject.

It seems a botanical specimen of a plant was sent to the KEW HERBARIUM by a Mr. Parish who called the plant *Iris Hartwegii australis* in order to differentiate it from the true yellow-flowered *Hartwegii* which grows in the northern part of California. *Australis* is a Latin designation meaning southern. Therefore the name is appropriate in that it calls this iris the southern form of *I. Hartwegii*. However some of the botanists I have talked with regard this as a distinct species and not merely a color form.

This iris grows on the high mountain ranges of southern California. It is plentiful on the San Bernardino mountains above 3,500 feet, and is to be found all along the Rim-of-the-World road from Crest Line to Big Bear Lake and no doubt extends far beyond these limits in all directions. It is also reported from Mt. San Jacinto and on the high peaks of the northern part of Ventura County. They grow along the pine belt in decomposed granite soil; invariably the rhizomes are about four inches below the surface and often covered with six inches of pine needles. They will even grow in the cracks of rocks. They seem to do equally well in dense shade or out in the open, but always grow on a slope. For association they are partial to deciduous ferns and often the two plants are so interwoven that it is hard to separate the rhizomes.

In the winter months they are frozen solid and are covered with a foot or more of snow but with the melting of the snow and the spring rains they grow quickly and bloom as the ground begins to dry out. They bloom in June, those in the lower elevations starting first and moving upwards at the approximate rate of a week for each thousand feet of elevation. By the first of August the seed pods are ripened and the plants themselves begin to die down because of the terrific heat and the lack of moisture in the ground.



J. N. Giridlian

IRIS HARTWEGII AUSTRALIS

These irises never seem to form colonies as the plants are found singly and loosely scattered over the hillside. Even the individual clumps are loosely formed and never seem to have more than a few fans of leaves. The leaves themselves are very narrow and lie on the ground so that it is not easy to locate a plant that is not in bloom.

Iris missouriensis is highly restricted in Southern California. There are only three known colonies which are separated from each other by great distances. A small colony is reported from the vicinity of Fort Cajon. Another stand is to be found on the shore of Lake Cuyamaca in San Diego County. The largest colony consisting of about 60 acres is found on the shore of Big Bear Lake in the San Bernardino mountains. Unlike *I. Hartwegii australis*, *I. missouriensis* forms solid stands. So densely do they grow that it is difficult for any other plants to get a foot hold. Their only companion seems to be the pretty little *Lewisia brachycalyx* which hides its beautiful satiny white flowers under the iris leaves. They grow in heavy, black adobe soil where the water from the melting snow seeps through the ground and makes its way to the lake. Here the iris has its roots right in the water until after the blooming season after which the ground is dried and baked solid. In its choice of habitat it seems to be identical with the Louisiana species, the only difference is the matter of elevation and winter temperature. They bloom the latter part of June and the flower stalks vary in height from one to three feet according to the supply of water. On the edge of the colony where water is not abundant the plants will grow but will not bloom. The color of the flower is creamy white with varying amounts of violet veining and a yellow signal blotch around the crest. I have never been able to locate either a pure white or a pure violet form.



J. N. Giridlian

IRIS MISSOURIENSIS

ADVENTURES WITH THE DWARFS

LENA M. LOTHROP

■ The little irises appealed to me even in my early "iris experience." I decided to grow and breed them. In vision (and in ignorance), I saw miniature San Gabriel's, Mad. Durrand's, Rialgar's and Purissima's coming from California pollinated seed! I confided this dream to a friend who had greater seniority in iris growing than I. He asked kindly, "Do you think they grow well here?"

The simple question cooled my enthusiasm so that the months went round the clock with nothing being done about dwarfs, but with the return of spring my desire to grow the little flowers became determination. An order for roots was dispatched with the request for an early delivery as I had already learned what California sun does to newly planted iris roots while he is maintaining temperatures well above 100. However the plants did not arrive until in July and in spite of my best care were soon overcome by the heat. The order was replaced by the dealer only to be wiped out a second time by an over-zealous yard helper with his rake in quest of stray leaves. Some rescues were made from the compost heap and some stakes but their true identities were not known. The next order, sent in January to a firm promising immediate delivery had not arrived by the end of a hot April so the order was cancelled and refund requested. There has been no refund. Such obstacles seemed to make the dwarfs even more desirable. Through friends, through exchanges, and by purchase they have come till now the weeding-out point has arrived.

Seedlings have been raised. No baby San Gabriel's or Rialgar's have appeared among them but it has been interesting to note that all dozens of Curiosity x Orange Queen are, contrary to my pet theory of maternity determining height, quite dwarf. It is interesting to note that Sonny and Marocain, of fine quality themselves, produce fine seedlings, that Mireille, with its odd shaped petals has reproduced those petals in caricature with but one exception. Nothing can be more absorbing than to try to probe their innermost secrets; "Is your father really Lurida, he who is supposed to have never fathered young, or was it a bee?"

The rounds are made each morning with note-book, rule and trowel. I feel of their stems to learn if a second bud is there. Exasperated I watch them with Victorian false modesty tuck under their falls. After too hasty action I learned that this is sometimes caused by adolescent shyness so now the trowel is withheld until the second day. I prostrate myself to reach their fragrance and wish Mr. Gersdorff were here to do it for me, for after all, is it "spice," or "grapes" or maybe only "new mown hay"? The morning when they first bloom they are given a little stake with a number on it, if they fade that same day the stake is taken away and they are given the air.

It is by experience that we learn. No variegates have been produced by crossing purple and yellow, no amoenas by combining purple and white. Some blends have bloomed and I am hoping to see "pinks" next year but to get real breaks in color it seems necessary to introduce the blood of other species. This has been done by Mrs. Dean, Mr. Williamson, Mr. White and Mr. Sass in producing some of the dwarfs I will describe.

Tall or dwarf, all iris flowers should be in proportion to the height of their stem, and stems of dwarfs as well as the tall bearded may be stiff and ugly or slender and graceful.

Of the blue-purple dwarfs NIOBE is one of the best because of its dependability. It is a most profuse bloomer and makes several appearances during the year. Another in the same class is ULTRA. It bloomed in December, in January and again the latter part of February. Both of these irises are of the larger type of dwarfs and both lack the fine silky texture that belongs to many of the true dwarfs. ULTRA has horizontal falls, an admirable characteristic that is rare among these small irises though I cannot imagine why they were made any other way. CYANEA, a blue-purple, has the fineness of finish and texture which we like to see in any iris but the stems are so short that the flowers rest on and cover the foliage. It is a good bedding iris. The most effective use of dwarfs that I have seen was in a Pasadena garden where they were planted in beds in the lawn. Many people stopped their automobiles to inquire what they were.

I had thought to discard some of the red-purples this year but each and every one produced a good reason for remaining. MAROCAIN is the best dark dwarf in my garden. The deep rich color extends up into the haft and the stems are slender and graceful. The petals are broad and well shaped and are content

to stay where they belong, neither stretching, nor twisting, nor tucking themselves under. MIREILLE is carelessly formed, has a sprawling beard but the color is bright and clear and it possesses an elusive charm. BLACK MIDGET has been, in years past, a cunning little globular flower on a knitting-needle stem but last month I was shocked to see the great-wide-open spaces between all its petals. Its sentence is suspended until next spring. When GRAMINEA bloomed I thought it was just "another red-purple" but I had to admit that the flowers were nicely formed, that the color was good and the stems slender, and, after a long blooming period, decided there was every reason for keeping it. JEAN SIRET has exceedingly fine texture but it is not much of an iris. It is sure of its bed and board for the present because of its reputation for everblooming. DITTON PURPLE bloomed while I was away and PUCK is an adorable little ball of a flower with a golden beard.

The color of JUDY reminds me of the color of Edouard Michel and the throat of Judy reminds me of the throat of *Kochii*. It is a rich and unusual color among dwarfs. Its stiff, narrow, white beard forms an attractive accent. The flowers lasted three days.

WIGAN is a nice bronzy red-purple with yellow hafts and dark dull, gold beards. These bronzed flowers I class as dark blends. VERDUN, SFAX, and LURIDA are of this type. VERDUN is a rich, velvety brownish-red-purple. The upper part of the falls and hafts are bright gold but VERDUN has an obnoxious trick of tucking its falls sharply under. Kind treatment and persuasion have no effect on them. The description of VERDUN would very nearly fit SFAX but they are not alike. The standards of Sfax stand upright and the falls are blackish-red-purple. The falls do reflex but not outrageously. The upper part of the fall is gold and there is a trim narrow beard of gold. LURIDA has individual charm. In form it is different from other irises. The petals are narrow and the falls are held horizontally. The texture of its silky standards and velvety falls is of the finest. In color it is browner than any dwarf in my collection. It blooms late in spring and again in the fall.

White dwarfs are chary of their bloom for me. The BRIDE and JOHN FOSTER have made little return for their board and lodging. A little pigment seems to make considerable difference for LUTESCENS STATELLAE bloomed itself to death.

The best yellows in my collection are ORANGE QUEEN and

SONNY. Orange Queen is really too large for its height but to be without it is unthinkable. Sonny is ideal. It is richer, in better proportion, and has better substance than HARBOR LIGHTS, or for that matter, any yellow that I know.

I am discarding the blue ALPIN because of its thin substance and narrow, twisting petals. LOBELIA could go also as it is not distinct in any way. YLO, MANDARIN and CHAMEIRIS AUREA will be "let out" on account of their inability to endure our blazing sun. MAX departed without my consent. I think it would have been a good bedding iris.

There may not be "ugly irises" but certainly there are irises without charm and among them are three dwarfs which are being discarded for that reason. ROSE MIST has coarse texture, reflexing falls and scanty beard. The white from the haft extends far out on the blade and it is heavily veined brownish purple, and this on a "pink" iris! COMMANDANT DRIANT with his long, twisting, trailing falls will accompany ROSE. His standards are wide enough but they also writhe. I suppose he was introduced because of his pale resemblance to a variegata. Another dwarf which evidently "got by" on color alone is NYX. It is one of the taller dwarfs growing 18-20 inches tall. The stem is a straight heavy stick. There are side blooms but no branches so the flowers open crushed close to the main stalk. The flowers are quite like Crimson King and are rich when they first open, however they soon fade and the falls "pinch" and become "stringy."

There are two thin textured irises I could not garden without. One is GLEE. It is almost transparent, like a bit of sunlight. The nicely formed flowers are so tiny, and the stems so slender, that *in shape* it is my ideal of a perfect dwarf. The other, AZUREA, I never have enough of. It is fleeting as a fairy—there is scarcely anything but a memory of bits of sky clustered on earth.

REFLECTION, by which I suppose Mr. Burchfield meant reflection of the sky, is more satisfying and larger than AZUREA—not so tantalizing. It is a good bedding iris having its foliage well covered with flowers. COMPACTA is a lovely blue dwarf. In color tone it is between the light blues and the deeper blue-purples. It is the only dwarf I have seen in that color. The form is compact as its name indicates, with broad petals nicely placed and firmly held. The lovely color is smoothly laid over the flower and up into the haft. ERNE has nice form and is quite attractive. It comes in light tannish tones with flecked

falls. AUTUMN ELF, a new dwarf, was planted late last fall but it gave me one stem of lovely flowers. The standards are white and the falls are light violet. I suppose ultimately we will have ever-blooming irises (though God save the day!) and this dainty iris is supposed to be a step in that direction.

The least of all these lesser irises that have bloomed in my garden is the species *arenaria*. One needs to be on the look-out or it will not be seen for one day there is a tiny yellow bud, the next a minature golden iris and the third day, alas, nothing! I learned too late that it needs sun,—sun and sand.

Some years ago Mr. Milliken had beds of irises bordered by broad bands of blue-purple regelia hybrids of Mrs. Deans' raising. They were not being sold but some of them found their way into my garden where they have given much pleasure. They are vigorous, multiply well and bloom profusely. They are dark with a touch of bronze on the haft and some of them wear a band of mourning down the center of the fall. Among these plants came another hybrid which when it bloomed brought me to my knees for it was a blotched little mongrel—for all the world like a fluffy mongrel kitten that needed to be caressed.

Dr. Berry obtained some of the Williamson regelia hybrids. I saw them in bloom and coveted No. 9. He had scruples about letting them out of his garden so it seemed very unlikely that I would ever have No. 9. I wanted it very much. Then one morning early the telephone rang. It was Dr. Berry at the San Bernardino railroad depot. He had just gotten in from the East and it would be some time before he could go on by trolley to Redlands. Was I up? I was. Had he had his breakfast? He had not. So I brought him home and he sat on the high stool in the kitchen while I prepared breakfast. Then I took him to Redlands, and his scruples took a temporary leave of absence, so that when I returned a tiny root of No. 9 came with me. For three years now I have tended it and nursed and fed it on wood ashes and blood-meal. Once the yard man snatched off its few leaves so I built a fence of stakes about it and then surrounded that with a wall of stones. The long-looked-for bloom appeared this spring—its enchantment has vanished—I must have been bewitched.

Two dashes of bright blue in Mr. White's garden arrested me. On consulting labels I found BLUE TOPAZ (I had never

seen a blue topaz before) and BALROUDOUR. BLUE TOPAZ has narrow petals with flaring falls and two flowers to each eight-inch stem. The form becomes ragged soon but the color, Pale Violet veined Bluish Violet is unusual. BALROUDOUR has better form and is more attractive. The standards are blue-gray, but the rib of the standards is Amparo Blue which is a real blue. The crests are pale green and there is green on the blade of the fall. Minute veins of blue-green cover the falls. It is a delightful medley of delicate blues and greens.

Among the seedlings at Whitehill bloomed a pogo-cyclus hybrid with dwarf pogon form. The red-plum petals were broad, the flaring falls very velvety and the standards with cockled surface had a metallic sheen. The vigorous clump was full of rich and lovely flowers. It is still under number, 4-B-7.

This is the second year for a pair of Mr. White's Charon hybrids. One of them which he calls Brindle Pup makes us laugh, it is such a gay, boldly marked little fellow. The other seedling, No. 2-B-2, is exquisite beyond words! The rounded petals are plain and unruffled. The standards are conic and the falls flare. The ground color is frosted Water Green with a tinting of pale yellow. The minute veining of the standards is visible only by reason of a difference in the texture of the veins. The veins on the falls are light violet. They come out from the center of the haft framing the narrow, clipped yellow beard then radiate over the fall like delicate sea fern.

Urmiensis, the small yellow oncocyclus, by *Bonita*, a small yellow pogon, amazingly brought forth three charming light blue dwarfs. 1-B-14 is in shades of Wistaria Blue, but the rib of the standards is green and the flaring falls bear a characteristic oncocyclus signal patch of violet at the end of the yellow beard. My eye could not have enough of looking at them. Another lovely dwarf was Flora \times Aphrodite, 1-C-16, which shows quite decidedly the pogon influence but the broad petals have the lustrous sheen of the oncocyclus. The slender thirteen inch stem had two branches. The standards are pinkish violet and the deeper falls bear the dark violet signal patch. These patches of deep color at the end of the beard are very decorative.

There are no lovelier dwarfs than our own California species. *Bracteata*, in varnished golden yellow with bold veins of purple is a striking and beautiful iris but it is not a good sport—it

gives up too readily. *Douglasiana* and *Purdyi* multiply and bloom profusely year after year if given a place to their liking and left undisturbed. *Douglasiana* comes in a variety of shades and markings and as they grow so readily from seed one can discard those less desirable. *Purdyi* is distinct from *Douglasiana*; the most unobserving would recognize the difference even in the foliage. *Purdyi* is supposed to be yellow but from seed purchased of Mr. Purdy all my flowers are glossy white flushed over the falls with rosy lavender. It has brought me more blue ribbons than any iris in the garden. I am convinced that *tenax* should be planted where it is to bloom, though I have bloomed it once from a transplanted plant. *Macrosiphon* shows some of its dainty yellow flowers each year but it does not bloom with the abandon of other of the species. The slopes of our own San Bernardino mountains are covered with lovely little irises in delicate shades of lavender and albinos are occasionally found. So far as I know this iris has never been through a botanist's hands. Someone has said *Hartwegii* but that is a northern yellow species and this San Bernardino iris is never yellow. Here's hoping our beautiful iris is not condemned to bear that name.

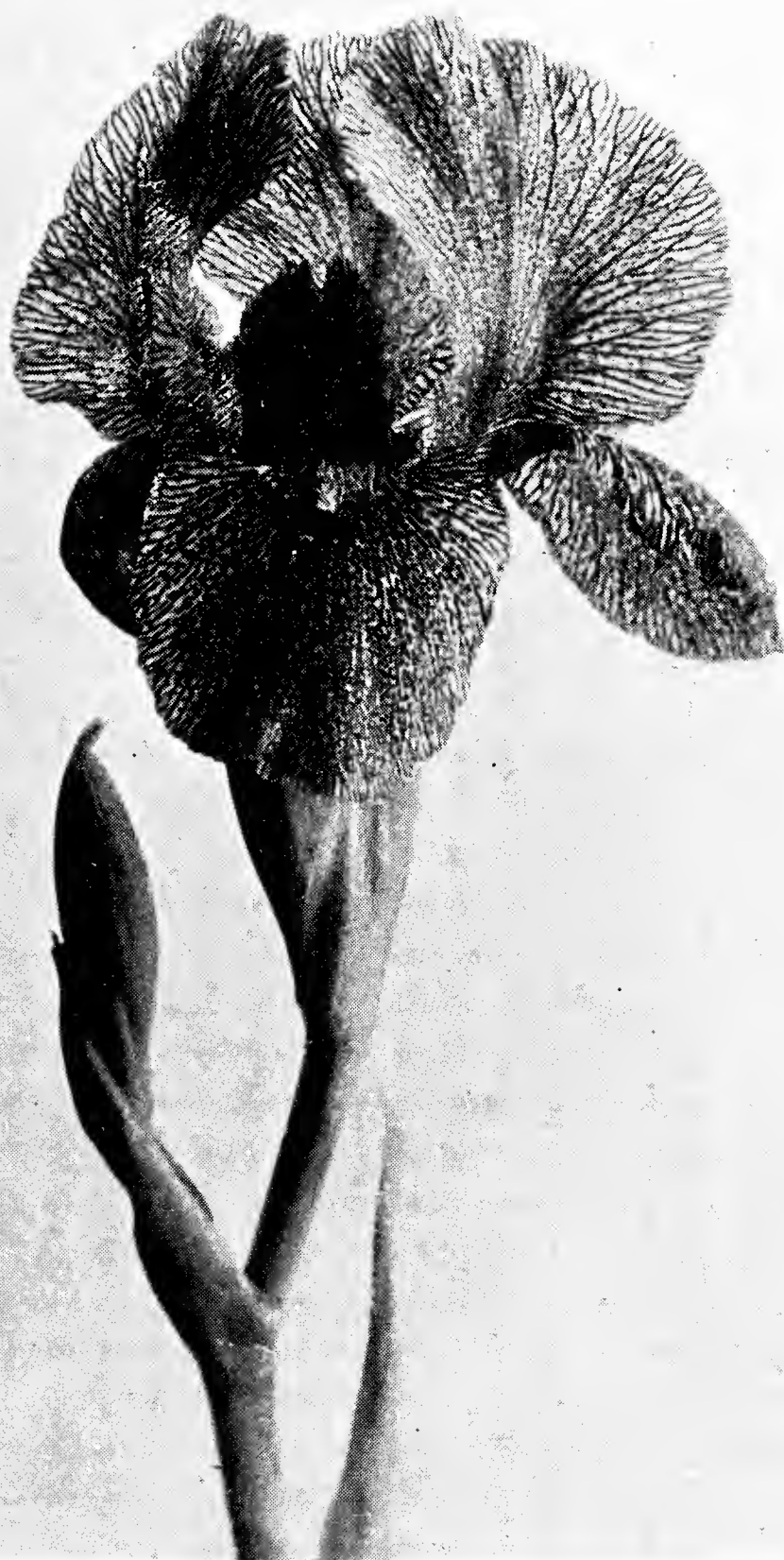
Many of the dwarfs have a trick of surprising us with a bloom now and again through the year. At the present time while we are suffering from an iris over-dose we may not appreciate that trait but later on these unexpected flowers will give us much joy.



AT WHITEHILL

C. G. WHITE

■ The iris season has been happily marked by a flood of yellow seedlings many of fine quality and new tones. I have a tall yellow, lemon chrome, practically a self. This color is the limit of bright yellow in Ridgeway. Modern yellow parentage has shown a dominance when matched with dark irises.



Field Studios

“This is a surprising picture of a not-too-good pogocyclus, but shows what may be an expectation.”—C. G. W.



“Yellow M” on *Persephone*. The influence of “Yellow M” shows in the color of the background of its seedlings.



“Yellow M” on Charon. The background is a pale opaque yellow; the veins are a deep rose red.

An encouraging number of pogo-cyclus seedlings have bloomed, some decidedly charming and interesting. One a Lady Paramount on Hebe, has the loveliest blended dark falls.

In general, especially in the old clumps, there has been a prevalence of crooked stems, too short stalks and blooms that are below par. These faults are perhaps due to a month of summer in the lap of early spring, following no usual winter weather.

The main drive of my iris breeding is to transform oncocyclus characteristics into hardiness. This must be done or much of delight and charm will be completely barred from the iris garden. Outside of Wm. Mohr and perhaps Zwannenburg the achievements in this field strike me as negligible. The possibilities are marvelous. Think for example what the transfer of the tip of the falls in *paradoxa* to a grand pogon would look like: or a *susiana* with a warm background such as already exists in a *susiana* × *hauronensis* cross! And the potentialities in broad hafts and rounded falls are desirable.

There is a statement attributed to Stonewall Jackson, that the art of war is to get there firstest with the mostest men. Something like that principle applies to pollenization in my experience. I use a camel's hair brush to work the pollen all over and into the surface of the lip of the stigma.

In our dry air pollen spoils quickly but removed from the anthers and capsuled it is good for a month or six weeks, an important consideration. Lady Collet taught me that trick.

Persistency and multiplicity are fundamental in making difficult crosses. My one Mm. Mohr seedling was the culmination of pollenizing five hundred blooms. My seedling was the first produced, but there are three blooming in California this season. Heretofore Wm. Mohr has been completely sterile. (Mr. White tells me that Wm. Mohr seems to be setting seed in a number of places this season. Who can account for that?—Ed.)

A number of claims have been made recently that the iris does best under a rotation of ground. My pogoniris ground is generally rotated two years out of four. It is a two-year rotation for the purpose of avoiding the marked second year slump that occurs in seedlings when moved after their first



“Yellow M” on Susiana. This iris shows clearly the fabric-like texture of the falls. This characteristic is also noticeable in “Yellow M” on Persephone and Mohrson.

season. At these times it is heavily fertilized and supplied with humus.

Prof. Essig grows iris of amazing vigor year after year on the same spot. He manures extensively between plantings. Mine are no better grown.

Generally I plant under overhead slats to defeat the effect of fierce suns.

The oncocyclus and regelia groups are put on fallowed ground yearly. They are maintained in growing vigor with the utmost difficulty. There is a marked increase of disease on replanted ground.

The thriftiest Susianas I have seen are in the garden of F. C. Reibold. Mrs. Reibold tells me she soaked the rhizomes in strong permanganate of potash solution for thirty minutes before planting out.

Oncocyclus iris are generally dug and stored every summer. Strong heat with moisture is a bad combination for them, though water and heat are all right separately.

My hunch has always been to plant iris seeds in early summer. Four years ago, in the push to get away from Redlands early, some pods showing only a suggestion of split were opened and the almost white seeds planted. They germinated in September, a month or two ahead of the thoroughly ripened brown seeds planted at the same time. Since then this very early planting is a common practice. An English gardener has recently advocated this same procedure in an article in *Garden Illustrated*.

My seeds are treated with semesan, potted, and the pot nested in another, to aid drainage, prevent rapid drying and moderate the changes in pot temperature.

The Boyce-Thompson Institute has demonstrated that many difficult seeds can be easily sprouted in an electric refrigerator if packed in damp moss.

Dr. Berry has had seeds of *stolonifera* lying in the ground over eight years unsprouted and unrotted, so I tried seeds of that variety. A good number germinated in the refrigerator in three months.

In the Whitehill garden, a red label is a discard signal, a yellow expresses doubt and a white approval.

In spite of the fact that no iris is judged in the glamorous light of dawn or of sun-setting (when all iris are lovely) these labels are often changed, some several times.

Early acquaintance judgments have therefore no standing whatever. So I most heartily approve in the increase of time given in the award of the Dykes Medal. At the same time it is possible to have a certain sympathy for the iris broker who wants the award as a hall-mark of a new product at the time it would do him the most good commercially.

This ritual of iris judgment by arithmetical points makes me wonder which is the most important, the iris or the score card.

The Rose Society ran into this very matter of points' versus desirability at a recent show in the Northwest. For the third time running the sweepstakes was awarded a certain rose. At the last judgment not one of the three judges officiating considered it worthy of a place in their own gardens. The only way to fully express an honest opinion of such a situation is by profanity—long and deep!

I know a horseman who for many years has had the selection of judges for very successful horse shows in his locality. He takes the ground that there are many opinions about horse-flesh in the Hunter class, and he so varies the judges that any owner of a good horse may sometime find a judge who thinks as he does about conformation, and will give his mount a blue ribbon. If judges had been selected of a set way of thinking a few experts would perhaps have profited at the expense of a general live interest and pride in horses.

I think I see a steady narrowing and hardening of opinion among iris leaders of what constitutes a good iris, especially in the matter of form. The time may not be so distant when the iris in the garden will be as conventionalized as it is in heraldry.

Man's approach to beauty is various. I believe earnestly that the best good of the Iris Society, and the best development of varying charm and interest can only come by giving the judges full individual liberty of choice,—they should, of course, not be ignorant of iris. Why all this worship of technicality in a cult of beauty!

The value of individual iris is certainly a sectional matter. In Boulder, Colorado, and in Salt Lake City, Wm. Mohr not uncommonly grows thirty-inch stalks. With me as high as twenty inches is rare indeed. In some sections it does not thrive at all. Wm. Mohr is a very mild example of this truth. Three well known and well informed irisians from distant localities visited California this season. They found a number of varieties so different from those grown in their own places as to be unrecognizable here. The differences between their own localities were less marked but very real.

The iris interest, however, stretches far north, way south and furthest west. It is this wide interest that the national society has to foster, not the choice of certain iris for them all, nor a mold of thinking.

NOTE: There is a very vivid illustration of what location does to iris in a comparison of varieties in Dr. Williams' mountain and valley gardens. In the mountains, thirty minutes' ride away, at an elevation of nearly a mile, Lent A. Williamson, Morning Splendor, Tropic Seas, Julia Marlowe, Argynnis, Dolly Madison and Rialgar are so supremely more glorious than the same sorts in the valley that I was unable to recognize them. Any judgment of a variety at one place would be of no value whatever for the other garden. Likewise a rating in each place averaged, could only be a rank injustice or an over appraisal.—LENA LOTHROP, *Associate Editor*.

CHULA VISTA GOES IRIS MINDED

COMMANDER JOHN A. MONROE, U. S. NAVY, RETIRED

■ Chula Vista, California, is a residential-agricultural city of 5,000 population, situated on the shore of San Diego Bay, nine miles south of San Diego and six miles from the international line. Lemons and celery are its principal crops. Iris is one of its claims to fame. It came about thusly:

At the 1931 Chula Vista Community Flower Show, the author of this article discussed with Mrs. C. W. Darling, Chairman of the Flower Show Committee, the advisability of establishing a classified Iris Section. Mrs. Darling, by the way, has been in charge of our Flower Show since its beginning, thirteen years ago, and has made it one of the outstanding shows in this section of many shows. This action was suggested by the fact that specimen stalks, collections and artistic displays were all competing together in one class, "Best Display of Iris." This was common to all our Flower Shows except San Diego, which had a classified Iris Section. I immediately found myself "Chairman of Iris" for the 1932 show. A week earlier at the San Diego Flower Show, Mrs. Paul V. Tuttle, Iris Chairman of that show, Mr. C. S. Milliken and Dr. S. S. Berry who had large displays, all had given me lavishly of their time, so that I had some inkling of the possibilities of iris and had learned that there was a national organization of iris lovers.

A meeting of those who had exhibited at the Chula Vista Flower Show was called. Seven attended. The Chula Vista Iris Club was organized. It was decided to put Chula Vista on the iris map. A show scheduled following that recommended by the American Iris Society was adopted; flower containers for trophies were purchased.

Since the proposed schedule included in its 36 classes, 14 specimen stalk classes for bearded iris as well as 8 for beardless and 4 for bulbous irises and also the irises in vogue in the neighborhood were of the vintage of Juniata, Fairy, Aunt Rachel and Queen of the May, it was decided to obtain some of the more modern irises. Then ensued much poring over the

iris catalogues and the A. I. S. rating list and bulletins in an endeavor to select two collections each of which would fill the classes that we had adopted and which would contain the best varieties we could afford to buy. Two collections of nearly equal list value were arrived at and in order to get the best possible price, they were to be ordered in triplicate, thus making a total of six collections to be purchased by six of our members. The list was sent to several California dealers and was purchased from the lowest bidder. Each member paid the actual cost of the collection which he or she received. Later on, as the irises have made increase, members have exchanged with each other and with folks in the nearby towns.

The original list follows, with those that have done well starred:

**Purissima	Avalon	*Souv. de Mme.
*Kashmir White	Wm. Mohr	Gaudichau
Theseus	**Pacific	Sir Michael
*San Francisco	**Santa Barbara	*Pioneer
*True Delight	*Souv. de L. Michaud	Moa
*True Charm	*Princess Beatrice	Cardinal
**Mildred Presby	*El Capitan	**Rosado
*Rhein Nixe	Wedgewood	**Frieda Mohr
**San Gabriel	Ideal	Dolly Madison
**Don Quixote	Gold Imperial	*Coronado
**Mme. Durrand	George Yeld	**Monspur
Candlelight	*Citronella	**Louisiana white iris
Valencia	King Karl	** <i>fulva</i>
Valkyrie	Jubilee	<i>japonica</i>
L. A. Williamson	**Emperor	<i>tectorum</i>
Ambassadeur	**Snow Queen	<i>cristata</i>
**Bonita	**Aurea	

In 1932 the first show was held under the new schedule with 36 classes. Mr. C. S. Milliken of Pasadena, California, judged this show. Although the new varieties were then only one year plants, quite a number of fine stalks were shown and the display attracted considerable interest and favorable comment. Club members also showed at the San Diego Flower Show with good success.

Our 1933 show was the first to be held in co-operation with the American Iris Society. Mrs. Lena M. Lothrop of San Berna-



Japanese iris, Kombarin, in the garden of Commander Monroe, 15 months after planting with 30 stalks, 39 inches tall and flowers 7 inches in diameter.

dino, California, judged this show. The classes were well filled with fine quality blooms. In view of the A. I. S. rule allowing but one award per class per exhibitor, entry was limited to one per class per garden. This works fine in a season when there is plenty of bloom at show time, especially if show space is limited as with us, but not so good in a year like this (1934) when bloom is sparse and the show is held two weeks before the midseason peak. Our club members again in 1933 showed at the San Diego Flower Show which hit us at our peak and they did very well indeed.

More varieties of irises have been acquired each year since the original lot, by exchange, gift and purchase, until there are approximately 180 varieties of bearded iris and 60 varieties of beardless iris, mostly modern, being grown in the gardens of Chula Vista.

As soon as newly acquired irises demonstrate their satisfactory performance, exchanging begins. Since the original purchase, those members who have desired to buy new varieties have combined their lists and submitted the combined lists to dealers, purchase being made from the lowest bidder. Each pays for what he gets, less discount. The criterion for judging the performance of an iris under our conditions includes ability to make height of stalk as given in catalogue, resistance to fungous diseases and thrips, rapidity of increase, ability to take hold quickly so that it may give a number of bloom stalks the first year after planting—stalks of nearly normal height. We try to get our planting done before July 1st in order to take advantage of our long growing season. In good iris years some varieties will give as many as eight or ten bloom stalks the next spring after planting. Some of the later acquisitions that have made good are: Canyon Mists, Indian Chief, Jacinto, Los Angeles, Rosa Bonheur, and San Diego; all the varieties of beardless irises.

This list would have been longer but we have had a poor season for bearded iris, both as regards stem and freedom of bloom, so that many promising varieties are still on the uncertain list.

Before this year, the Club meetings were held whenever there was business to be transacted although usually considerable informal discussion of iris subjects followed the completion of the business. This year, we are planning to have quarterly meetings with a speaker at each meeting. So far there have been no regular dues, a collection being made to settle expenss such as trophies.

Interest in iris is growing locally and in nearby towns. Our club now has twelve members, another flower show has a classified iris section this year and one has expressed its intention of doing so next year.

The outstanding feature of this enterprise has been the hearty co-operation that our club has received from our show management, from the San Diego County press and from all the A. I. S. members with whom we have been in touch.

IRISES IN THE GARDEN

SYDNEY B. MITCHELL

■ The problems of an iris grower are many, and if he is a breeder as well, they are increased. Doubtless for the seedling grower the best plan is a nice new piece of ground each year where he can grow in rows the results of his hybridizing. If that is not possible, then an area large enough so that he can let half of it lie fallow after each crop of seedlings and then give the part to be used a good spread of farmyard fertilizer, well dug in, is next best. The seedling patch is a nuisance in the garden proper not only because it is in a constant state of change, but because irises look better in patches of many flowers of the same variety than in a medley of a thousand spikes each differing in color, shade, height or garden effect.

So I shall consider only the growing of irises in the garden, and mainly the tall bearded ones which are the most effective members of the family. Here the very first question which arises is whether segregation or dispersal is better, whether we shall have an iris garden or use our irises as incidents or accents in a mixed flower border. My own plantings have been so numerous, so large, and so varied in their conditions that I have tried all plans, and in my present garden I am attempting a combination.

Certainly in many gardens the simplest way is to provide an area—in a deep, narrow city lot at the rear, or in a broader, larger garden some section not too near the house—that can be given up altogether or almost so to this flower alone. Under either conditions there are some advantages in screening off the iris garden, not merely to provide an element of surprise on first seeing it, but because the monotonous foliage, once flowering is

over, is hardly what you want to have always before you. If there is hesitation in absolutely devoting the space to irises, a possible compromise and, like most compromises, not wholly desirable, is to combine them with some other flowers which bloom at different seasons. If the iris planting is new and there are good spaces between the clumps, one might interplant with some of the stronger growing, taller, cheaper varieties of gladiolus. These, having similar foliage to irises, fit in well, but once the irises begin to crowd the space, or even before that when they are well established, they give the gladiolus a hard run for food. Under my own conditions where daffodils flower mainly in March and irises in May, they might well be grown in the same border or area, for both get along nicely without summer water. But if the irises are to be followed by a later interplanted flower, either an annual or perennial, care must be taken to select only such as grow upright and are sparse in the foliage at the base, so that light and sunshine may always reach the iris rhizomes, a consideration which at once eliminates petunias and other spreaders and suggests snapdragons and larkspurs, among the annuals, and asters among perennials. Where the perennial asters or Michaelmas daisies flourish, as in England or many parts of eastern America or the north Pacific coast, one might follow the arrangement of a double iris border not long since described and illustrated in an English magazine, where the irises made a gorgeous show in June and the interplanted asters were equally effective in September and October. This particular perennial is suitable because to do its best the Michaelmas daisy needs yearly separation and replanting in spring, and this would allow of the necessary thinning out and fertilizing where two crops are grown together. Of course it is also possible to combine irises with some shrub background, such as lilacs, and to so edge the paths in the garden with dwarf annuals or with such border perennials as pinks, *Alyssum saxatile*, *Nepeta mussini*, or the common sunroses or helianthemums as to take away the curse of the rigid margins where irises come right to the walks. I have said nothing of planting irises in formal gardens because they have always seemed to me singularly ill adapted to such situations, particularly as this is apt to bring them too close to the house. Another place I don't like to see irises planted is in narrow rows edging walks, where they always seem thin and ineffective in bloom and pretty stiff when out of it.

On the other hand, if employed merely as materials in a herbaceous border, the best use of irises seems to me to be as accents repeated at regular distances to tie the composition together. Here the important considerations are the relations of their colors to adjacent plants and to the background. They will be best placed where they repeat the color of nearby flowers of different growth and form, or where they pick up a suggestion and carry it on, a clump of a good lavender blue iris near *Aquilegia coerulea*, the blue and white Colorado columbine; a rich mauve purple in front of the tall meadow rue, *Thalictrum dipterocarpum*, or a yellow iris picking up the color of a yellow bedding viola below it. Obviously here it is equally important to avoid the clashes between irises and other plants, such as getting a so-called red iris near a red oriental poppy, or a pink iris near a salmon poppy. May I here interject my last experiment with the bulbous Dutch irises in a new herbaceous border. These were planted in clumps of twenty-five bulbs of each variety at intervals of twenty feet or so apart. Because of their rather short flowering time they were interplanted with tulips. Had both flowered at different times they would have given two flowering periods in each space, but as it happened this season they flowered together and we got some pleasing effects from white tulips (Carrara) and white irises together and also from yellow tulips (Inglescombe Yellow) with yellow irises, also from tulip Dido (salmon rose) with blue irises and the stronger contrast of Pride of Harlem tulips and a still bluer iris.

Possibly a very few iris growers who are also general gardeners may be interested in my solution of my own problem of a large iris garden on a hillside which normally gets no rain from June to October. My collection of named varieties and selected seedlings extends in a band from twenty-five to forty feet wide, a band the margins of which are irregularly waved. Down the hill below them extends a border of evergreen shrubs which when more fully developed will give a pleasant and permanent background. Some twenty or twenty-five feet above the iris band up the hill is a border of perennials, shrubs and annuals, margined by a path below the house and near enough to be kept watered and cultivated all summer. The main iris border consists of large irregular groups, sometimes the development of as many as fifty separate plants of a variety, sometimes fewer, depending on their garden effectiveness or the number of rhizomes available.

Below this band and on into the evergreen shrubbery some of the less attractive irises extend, while above in the herbaceous border facing the upper path are smaller clumps of the newer varieties, fine selected seedlings on trial and a few smaller bearded irises, or those needing close inspection for this effectiveness. From north to south there is a general scheme of color beginning with red purples, then to blends, next lavenders and near blues, next to them plicatas, whites, yellow (mostly in front of the whites) and lastly pinks. Thus far the weakness of the sequence has been in finishing with too much white, pale blends and pink, and I propose to use more of the so-called reds with these, for background and to stiffen the planting. Yellows, particularly some not too deep in color, could be used with advantage throughout the border, for these prove far less spotty than whites and serve to brighten up the whole planting, a function for which they are greatly needed. Between the bays of the solid iris planting where this merges into the herbaceous border, groups of red or yellow kniphofias (tritomas), commonly known as red hot poker, have been planted, also some of the taller decorative dahlias, a few delphiniums—more are needed—the lilac pink shrubby *Lavatera olbia* (the related hollyhock could replace this in colder climates), and other tall perennials such as *Achillea filipendula* and some of the sages. The effect of this is a great glowing mass of irises in early May with outposts of the same nearer the house, but after flowering the growth of tall perennials at the back of the herbaceous border somewhat screens these and the interest through the long dry summer is focussed on the plants found there, oriental poppies, pentstemons, phlox, campanulas, Michaelmas daisies, and pompom and single chrysanthemums, which carry on until late autumn along with late flowering annuals. Previous to iris time and during it there are patches of color in the facing herbaceous border, mainly from tulips, Dutch irises and a few early perennials and annuals, but never enough to distract attention from the main feature of the time, the great iris border.

CHROMOSOME NUMBERS IN NATIVE AMERICAN AND
INTRODUCED SPECIES AND CULTIVATED
VARIETIES OF IRISL. F. RANDOLPH¹

■ The first account of chromosome numbers in American cultivated irises was published by Longley in 1928 in this Bulletin (2). Most of the 36 horticultural varieties of bearded iris which he examined were diploids with 24 somatic chromosomes. The following year Simonet in France reported on chromosome studies in many additional species and varieties, including representatives of all the important sections of the genus (5). Among the Tall Bearded irises, in addition to diploids, Simonet discovered triploids with 36 chromosomes, tetraploids with 48, and one pentaploid with 62 chromosomes. Of special importance was his discovery that the large flowered Asiatic species, *trojana*, *cypriana*, *mesopotamica* and *macrantha* were tetraploids. These and related forms were introduced into Europe late in the 19th century and began to be used extensively in crosses with very favorable results early in the 20th century. Simonet also emphasized the fact that, in *Iris* as in other plant genera, there is a close correlation between high number of chromosomes and larger size of the plant and its flowers. Recently Nicholls (4) reviewed briefly the literature on *Iris* chromosomes and cited a number of my counts.

A knowledge of chromosome number is prerequisite to a genetic interpretation of breeding behavior, since the hereditary factors or genes are carried by the chromosomes. This is especially true among polyploids. Inheritance in diploids differs markedly from that in tetraploids, or other polyploids. For example, the ordinary diploid 3:1 ratio usually becomes a 35:1 ratio in the tetra-

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ploid because the latter has four instead of two sets of homologous chromosomes. Triploids are highly unstable types and differ fundamentally from both the diploids and tetraploids in breeding behavior. Although triploids themselves are often of considerable value in that they may exhibit hybrid vigor and flower profusely, they are invariably less fruitful than the parent forms and yield progeny lacking in vigor and fertility. Before a genetic analysis of such crosses can be made it is necessary to know the chromosome numbers of the parents.

The following chromosome counts were obtained chiefly from material supplied by Colonel J. C. Nicholls, and from collections in the Iris Test Gardens of the Department of Floriculture of Cornell University. I am indebted also to Miss Grace Sturtevant for specimens of *Caterina* and the original *cypriana* of Foster; also to Professor J. I. Hutchinson for bulbs of *histrioides*. The counts were made from root-tip preparations, and are given as the unreduced or somatic numbers. The native American species and varieties and the introduced species and varieties are listed separately; within these lists the arrangement is according to chromosome number. Occasionally different collections of supposedly the same species or variety had different chromosome numbers, and among a relatively small number of types in which counts previously had been made by other workers there were a few cases of non-correspondence in number. These deviations are best referred to differences in identification or nomenclature until definite proof of the identity of the forms in question has been established.

The native American irises, on the basis of these counts, fall mainly into four groups, (1) a 42-chromosome group including *fulva*, (2) a 44-chromosome group including *foliosa*, (3) forms with 43 chromosomes including D. K. Williamson (*fulva* x *foliosa*) and several "species" of Small and Alexander which presumably are also hybrids between members of the 42- and 44-chromosome groups, and (4) forms with approximately 70 chromosomes, represented by *virginica* and other similar or identical types. On the basis of chromosome number the native American irises appear to be quite distinct from other sections of the genus.

IRIS CHROMOSOME NUMBERS
NATIVE AMERICAN SPECIES AND VARIETIES

<i>pseudacorus</i>	34	<i>elephantina</i>	44
<i>pseudacorus gigantea</i>	34	<i>foliosa</i>	44
<i>setosa</i>	38	<i>giganticaerulea</i>	44
<i>setosa Hookeri</i>	38	<i>hexagona alba</i>	44
August Flame	42	<i>lancipetala</i>	44
Autumn Fire	42	<i>regalis</i>	44
Chef Menteur	42	Charles Hardee	70
<i>fulva</i>	42	Frenier	70
<i>giganticaerulea</i>	42	Oglethorpe	70
Nicholls 105	42	<i>shrevei</i>	70
<i>chrysophoenicia</i>	43	<i>virginica</i>	71
D. K. Williamson	43	Autauga	72
<i>fourchiana</i>	43	<i>versicolor</i>	108
Nicholls 102	43		
<i>cerasina</i>	43		
<i>vinicolor</i>	43		

The outstanding feature of the chromosome number relations among the introduced species and varieties of Bearded Iris is the polyploid series with 12 as the base number, and the prevalence of many forms with deviations of one or a few chromosomes from the base number or some multiple of it. Irregularities in chromosome pairing and disjunction at the reduction divisions as reported by Longley and by Simonet, probably account for much of this, especially among the tetraploids. In *histrioides* an unpaired chromosome fragment was present and there was some evidence of similar fragments in other forms, which would also account for variations in number. Since Iris is propagated vegetatively, the off-type (hypo- and hyperploid) numbers are perpetuated more extensively than in plants propagated only from seed.

IRIS CHROMOSOME NUMBERS
INTRODUCED SPECIES AND VARIETIES

<i>histrioides</i>	17	Prairie Gold	24
Flammenschwert	24	Princess Beatrice	24
Gay Hussar	24	Rubyd	24
Gleam	24	<i>variegata</i>	24
Gold Imperial	24	Cordelia	25
Mandaliscae	24	Frieda Mohr	25
Odoratissima	24	Lodestar	25

Nebraska	25	<i>kashmiriana</i>	48
<i>persica</i>	26	<i>mesopotamica</i>	48
<i>sibirica</i>	28	Morning Splendor	48
Aksarben	36	Nêne	48
Azurea	36	Nicholls 2930 (Kashmir White x Gold Imperial)	48
Ballerine	36	Nicholls 2931 (Kashmir White x Gold Imperial)	48
Coronation	36	Omaha	48
Frieda Mohr	36	Red Robe	48
Imperial	36	Shasta	48
Isoline	36	Souv. de Loetitia Michaud.....	48
<i>kashmiriana</i>	36	Valor	48
King Tut	36	Cardinal	49
Queen Caterina	36	Conquistador	49
San Gabriel	36	Los Angeles	49
Ticonderoga	36	Nicholls 11428 (Seminole x Shasta)	49
Graminea	40	Rosakura	49
<i>reichenbachii</i>	40	Ambassadeur	50
Soledad	44	Argentina	50
Crysoro	45	Beau Sabreur	50
Maygold	45	Desert Gold	50
Autumn King	46	Dominion	50
<i>cypriana</i> (Foster)	46	Duquesne	50
Santa Barbara	46	Kashmir White	50
Baldwin	47	L. A. Williamson	50
Moonlight	47	Nicholls 3558 (Ambassadeur x Rubyd)	50
Purissima	47	Nicholls 765 (Shekinah adv.)	50
San Francisco	47	Miss Willmott	51
Amas	48	Nicholls 7402 (Kashmir White x Dominion)	51
Candlelight	48	Nicholls 7246 (Miss Willmott x Cardinal)	52
Caterina	48	Magnifica	60
El Capitan	48	Rhea	60
Esplendido	48		
Fire God	48		
Helios	48		

The Dwarf Bearded irises represented in the list by *Graminea* and *reichenbachii*, and by *pumila* and *chamaeiris* counted by Simonet, are exceptional in that they have 40 chromosomes. The Intermediates which I have counted have either 44 or 45 chromosomes and are clearly hybrids between tetraploid Tall Bearded forms and the Dwarfs.

In many instances plants with different chromosome numbers, particularly those belonging to different number series, cross with difficulty or not at all. Therefore, it is interesting from the cytogenetic standpoint that the Dwarf Bearded irises cross quite readily with the tetraploid Tall Bearded irises. As an example, Soledad [44]² (*trojana* [48] x *pumila* [40]) may be cited. In genera other than *Iris*, such hybrids ordinarily are partially or completely sterile.

Ordinarily it is quite difficult to obtain hybrids between the diploids and tetraploids, but the parentage (1) given for Queen Caterina [36] (Queen of May [24]³ x Caterina [48]) indicates that the cross has been made successfully in *Iris*. However, many of the supposed hybrids between diploid and tetraploid irises (3) probably are not true hybrids, as for example, Dominion [50] (Cordelia [25] x Amas [48]), Caterina [48] (*cypriana* [48] x *pallida* [24]), Valor [48] (Ambassadeur [50] x Rubyd [24]), etc., since the chromosome number of these hybrids is not intermediate between those of the parents. On the other hand some of the seedlings of tetraploids, such as San Gabriel [36] (*mesopotamica* [48] x -----) undoubtedly do represent crosses of this type. There is little or no evidence from the chromosome counts to indicate that progeny have been obtained at all extensively from the triploids. When intercrossed they would not be expected to breed true for chromosome number but would produce mostly individuals with numbers somewhat less or somewhat more than 36. Likewise triploid x tetraploid and triploid x diploid crosses would give numbers intermediate between those of the parents. Such numbers are conspicuously lacking among the Tall Bearded varieties.

In this connection it should be noted that hybrids between forms with unlike chromosome numbers occasionally may be produced, which do not have numbers intermediate between those of the parents. This may result from the functioning of unreduced gametes, usually those of the seed parent. Such an assumption offers the most plausible explanation for the origin of

² Chromosome numbers are enclosed by brackets in the formulae.

³ Unpublished data of Dr. Edgar Anderson.

Rhea [60], a seedling of Isoline [36], and might also account for the origin of Dominion from Cordelia and Amas. But the origin of the pentaploid Magnifica [60] from Ricardi [48] and Amas [48] could not be accounted for in the same way; it could, however, if the pollen parent was a diploid rather than a tetraploid, i.e., an unreduced 48-chromosome gamete of a tetraploid in combination with a normally reduced 12-chromosome gamete of a diploid would produce a 60-chromosome pentaploid.

In a large, diversified genus such as *Iris*, with many species and cultivated varieties comprising several relatively distinct groups or sections, the importance of the cytogenetic viewpoint in the production of new and improved types can scarcely be over-emphasized. This is particularly true since it has been demonstrated that there is widespread variation in chromosome number throughout the genus. Within the Bearded section alone there are two polyploid series, one based on 10 as the reduced number, and another on 12 with diploid, triploid, tetraploid and pentaploid representatives. From the standpoint of compatibility very different results are to be expected in crosses between different members of a polyploid series, or between the members of different series; and the hybrids are often partially or completely sterile. Likewise the manner of segregation of individual characters in polyploids is very different from the mode of segregation of similar characters in diploids. The application of cytogenetic facts and principles along with practical knowledge and experience should be especially helpful in *Iris* breeding investigations.

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THE BREEDING OF YELLOW IRISES

SYDNEY B. MITCHELL

■ Inasmuch as I have stressed in my breeding of recent years the improvement of yellow bearded irises in size, height, branching and range and depth of color and have had some measure of success in my efforts, enough so that I propose now to taper off my endeavors in this field, others may be interested in some rather casual notes of my experiences.

Many years ago, while my own crossings were elementary and still few, I met the late William Mohr, one of our really great breeders. Interested then in both the garden use of irises and their commercial introduction, I urged on him more attention to the breeding of better yellows. His early efforts were in combining the yellow of the dwarf bearded varieties such as Orange Queen, not a true *pumila*, with the big Asiatic lavenders, Soledad, from *I. trojana* and Primavera, from *mesopotamica*, being evidences of the potency of the yellow in the rather insignificant other parent, a yellow which in remote ancestry still has a place in my newest seedlings. Astonishingly enough that grand pinkish iris, Frieda Mohr, was the result of working for a yellow in this way. Mr. Mohr's tragic death cut short his work and at the same time was responsible for my withdrawal from the commercial growing of irises to the breeding field. From his seedlings or seed I got material which now several generations back appears in the pedigree of the large yellows introduced from my garden, but the only yellow of his breeding which was named after his death was Bonita, one of a lot of yellow seedlings from Ramona \times Shekinah, most of them considerably deeper yellows than the pollen parent.

In the early twenties we did not know that the small yellows bred from yellow variegatas, Shekinah, Mrs. Neubronner for example, had a low chromosome count, generally 24, while the big Asiatic lavenders or the whites bred from them usually had twice that number, a situation which made their combination a very difficult though not an impossible matter. In theory at least the chances would be much improved by using the larger chromosome numbered variety as seed parent and the smaller for pollen, yet two of the important unnamed seedlings in my yellow

breeding were Shekinah \times Argentina, a good cream which only looked yellow when I had on my amber glasses, and Mrs. Neubronner \times Marian Mohr, an awful little bronzy runt which I was unable to keep alive but which was a useful parent. From these two seedlings came Mirasol and Rayo de Sol, real advances in yellow, the former being not an easy but a promising parent.

It was, however, the difficulty of getting size and height which turned me toward other possibilities. Crosses of available yellows with the big whites did not give deep enough color, so consideration was given to other possibilities of getting deeper yellow and substance capable of holding up against our California sun. My theory was that if a yellow red or bronze iris were crossed with a white, preferably a warm white, that is one with some yellow in it, that a few pure real yellows might result from the operations of the factors for albinism. Red bronzes like Sherbert or the red bronze Alcazar \times Esplendido seedling I used contain both the blue anthocyanin soluble coloring matter and the yellow plastic color. As albinos were commonly the result of crossing whites with lavenders, it was evident the factors for albinism could eliminate lavender or blue but might leave the yellow plastic coloring matter. A cross of a fairly large Shekinah \times Argentina cream seedling with a large reddish bronze Alcazar \times Esplendido seedling proved easy to make both ways, because here both had apparently the same large chromosome number, and among the many seedlings were a very few which were practically self yellows of size, height, and good branching habit.

The best of these my 6-12, eventually named Alta California, now well established and in some quantity in the nursery of Carl Salbach who owns the stock, was certainly the upstanding and outstanding tall yellow iris in that garden this year, and though it got off to a bad start from being judged from newly planted specimens it has both justified itself and this theory of yellow breeding. Its best reciprocal, my 6-98, never named, when crossed with Alta California gave one quite lovely deep rich yellow, which unfortunately has a weakness of stem which has prevented its introduction.

California Gold, my 1933 yellow introduction, also illustrates the validity of this warm white \times bronzy red procedure. Its seed parent was a cream from the same Shekinah \times Argentina crossed with another creamy white, and its pollen parents the red Grace Sturtevant, a flower which unquestionably contains yel-



Happy Days, a new large bright yellow iris which is being introduced this year from Prof. Mitchell's garden.

low, as I have had many not quite good enough variegatas from it. California Gold is a great big flower of very strong clear yellow, so bold that its original nickname was Brazen Hussy, a color I have not approached in any other flower but its own seedlings, and a variety more likely to be suited to wetter, colder climates than its Californian birthplace. Like Grace Sturtevant it is a relatively slow increaser and is not widely distributed as the majority of the few plants available were bought by amateurs who saw it in flower in my garden. It has good pollen and sets seed readily.

Still another seedling, my 9-33, bears out the importance of this idea. It was never introduced, but under the tentative name of Montecito it was the seed parent of Happy Days, to be referred to later. Its seed parentage was my 6-223, [(*mesopotamica* × Oriflamme) × Gaviota] × Soledad, a rather dirty cream, with a bronzy red Sherbert × Esplendido, while its pollen parent, my 6-13, was a creamy Argentina × Mme. Cheri crossed with the same bronzy red Alcazar × Esplendido used in the breeding of Alta California. The result of this complicated series of crosses was a tall yellow of the form of Santa Barbara and, at its best, as large as that lavender variety. It has been a wonderful breeder.

A next step in yellow breeding was to combine good yellows with red bronzes, a procedure I believed even more likely to deepen the shade of yellow than would be the crossing of two good yellows. The results here were very varied and in the first generation gave many yellows, though I doubt if I ever name any of that lot. My 9-17, a deep rich buff yellow, was from the 6-13 mentioned above crossed with King Midas, a fine plant which by the kindness of my late friend Franklin B. Mead I was privileged to use before its introduction. In the next generation the pollen of 9-17 on Helios gave me my most startling 1934 seedling, 1-12, a tall pure orange slightly flushed brown on the haft, a break in color so distinct that even when its orange buds were still unopened I was asked to put a price on a rhizome sight unseen. The use of the reddish bronze King Midas with Alta California gave several nice large deep bronze yellows, and, heaven alone knows why, one yellow ground plicata, this last only a fair flower in size or shape. Still another yellow seedling of different parentage bred with King Midas both ways gave some interesting coppery bicolors, one of which has been registered as Anaconda.

Of all the Cayeux yellows I have used Helios most in breeding. It appears to me to be an Alcazar seedling and therefore related to Fortuna and Sundew. Crossed with pollen of my large red Rubeo, a Cardinal, Sherbert, Esplendido derivative, it gave exclusively reds, but when King Midas was used with it I got blends, rosy reds (one a lovely new shade), and variegatas, the best of these last since registered as Portola, a flower of good size, fine form, and fine coloring close to the old Iris King. So I remember it from last year, before I cut it up so that this year it failed to flower. Rubeo crossed with several of my yellow seedlings gave both tall reds and yellows, but none of the latter as good or as deep in color as I had hoped I might get.

From now on, with the spade work over and many good yellows of different parentage available, the improvements will probably come more slowly and be mainly due to large scale combining of the best existing yellows. From the crossing of many of my own I have improvements on either parent, and from that seedling 9-33, already discussed, crossed with pollen of W. R. Dykes I obtained the huge and shapely pure yellow which under the name of Happy Days caused invocations to the Deity by several hardboiled iris breeders when they first saw it in my garden this season. In its two flowerings it has shown no signs of blotches, indeed in the dozens of Dykes seedlings I have raised blotching has been noticeably absent, because, I believe, the other parent has always been a pure yellow with no lavender or purple in its recent parentage. I cannot wax enthusiastic over most of the Dykes seedlings as I do not care for the persistence of its form in its progeny, and I therefore consider myself lucky that 9-33 had apparently in its complicated family tree just those qualities needed to get the best out of Dykes in the first generation. Next year and the following one I should flower second generation yellows from Dykes, but I begin to tire of breeding yellow irises, as doubtless you do of reading about them in this necessarily very personal account of one breeder's work.

VARIETAL NOTES

New Varieties in Northern California. By S. L. Jory.

■ To one living in Berkeley (Calif.), the mention of new iris immediately brings forth a picture of Sydney Mitchell's beautiful hillside garden with its hundreds of fine big seedlings, mostly yellows. A few of these have been introduced to the public, and some are being held for further observation. Most, however, have been already eliminated. I can testify to this with full authority, as I have become a self-appointed discard man in Sydney's garden. (What glee a man can have playing grim reaper in another's seedling patch.)

Considering seedlings blooming for the first time this season as still in the experimental stage, and therefore disregarding them, the Mitchell garden nevertheless contained some real treasures. First of all comes Happy Days, the immense clear yellow that looms in the minds of all who have been fortunate enough to see it. It is an iris that seems to have all the qualities so long sought for by breeders of yellows. This flower marks one of the great steps in iris achievement and rewards Mr. Mitchell for many years of patient effort. Hidden from view when approached in one particular direction, it was customary to bring new sight-seers "around the mountain" so that Happy Days might burst upon them in full glory. And what fun waiting for the first comments—or, in some cases, speechless admiration.

California Gold, introduced last year, might have rivalled Happy Days for showiness, but there was no "show" this year. All but one of the blooming size rhizomes having been sold, only one bloom was left for Berkeley. It displayed, however, the same bright brassy coloring that made it so popular a year ago, and also the same finely formed blooms. Sunol, a yellow blend that vaguely reminds one of the small and ancient Ochracea, was also fine. I also liked Peacemaker, named because its porcelain and light blue coloring acts as a foil when planted between varieties of conflicting coloring.

One could not leave the subject of the Mitchell iris introductions without mentioning two of the older ones—Natividad and Alta California. Both have merited all the praise that has ever been given them. Natividad combines purity, gracefulness, and brightness in a manner that I have never seen in any other iris.

It is not the largest, nor the showiest, but it is definitely one of the most pleasing iris that anyone ever grew. Alta California, now in sufficient stock to be shown in mass, decidedly proves its value—being a tall, branching yellow that adds a necessary note in the garden. It is one of, if not the most striking mass in the whole field of iris.

Stepping next door from Professor Mitchell's, I find myself in Carl Salbach's garden. Although shown under the same conditions as a whole field of other new varieties, three of Mr. Salbach's new iris attracted most of the attention. They are Brunhilde (deep violet), Dark Knight (deep ruby red), and Neon (red bronze). It would be difficult to choose between these three—the choice being largely a matter of preference between types. Brunhilde is a fine intense blue violet that is markedly better than any other iris of the same class I have ever seen. Dark Knight is a big, bold reddish or maroon colored variety, but I run to cover when asked for a detailed color description. It stands out because it is so definitely a dark iris, yet still remains bright and showy. Neon, a well-named iris, is a real "find." On tall, well branched stalks laden with blossoms, the bright rich red falls, and glowing golden bronze standards combine to form a most outstanding and admired iris.

Two other varieties demand a word. One—Eleanor Blue—is a fine soft, warm blue variety of good form and finish. It is an iris that you like better each time you look at it. Pink Jewel, the other, is very definitely a small iris, but in mass, it is most effective. I hesitate to call any iris "pink" with no qualifying remarks, but this one comes mighty close, particularly under artificial light.

Three blocks away, just over the top of the hill, lie the gardens of Professor Essig. Unfortunately the best of his new iris of this year were sent almost entirely to his introducer, so blossoms were not to be seen in Berkeley this season. Two of his introductions of last year, however, bloomed in full glory.

Shining Waters, a tall light blue of splendid form and with a host of blossoms on each stalk, was striking, indeed. When better light blues are bred, I'd like to see them, as this one is a real iris. Tenaya is another fine one, being almost exactly of Modoc coloring, but much taller, and of better branching habit.

In addition, of course, I have seen some really fine seedling creations, but discussing these too early in their career is, I believe, too dangerous a pastime.

Californian Irises in Massachusetts. By R. S. Sturtevant.

It was in 1921 that Miss Sturtevant received an F. C. C. from the Massachusetts Horticultural Society on Balboa (Mohr, 1923), and it was in 1923 (the year that she also listed the first seedlings from Mr. Sass), that she introduced the first California hybrids, those of Mr. William Mohr. These were the Korolkowi hybrids Carmelo and later Bellorio both of which received English honors in 1924. (William Mohr was still under number.) There was Balboa, a Parisiana \times *mesopotamica* hybrid and there were less interesting children of good quality, Prince Lohengrin and the twins Ramona and Silverado duller and smaller Dolly Madisons. Marion Mohr, Azulado (these palest blue in tint) Soledad, Rosado (blush), and, very shortly Santa Barbara were a bit later and of outstanding quality in their height and size. The first, a seedling of Miss Willmott \times Carthusian, did not prove reliably hardy but is one of the great, great, greats of Shining Waters (Essig) which might well owe its lustrous sheen of blue to Marian.

The poor, very gravelly loam of Miss Sturtevant's garden seems suited to these so-called tender irises and even after 20 below zero this last winter and only a slight covering of burlap the Californians were in as fine bloom as the natives.

I think our real interest in Californian hybrids is their height and size combined with varied colorings. Though perhaps only 10 per cent or less of *mesopotamica*, *cypriana*, blood enters into the more recent introductions we still look for these characteristics and, unfortunately, we seem to be possessed with the idea that even a 10 per cent strain makes for lack of resistance to cold, a quite erroneous impression in many cases.

The fact that they can also grow Oncocyclus and Regelias leads us to expect successors to William Mohr which, incidentally, I found in fine form after our tough winter. As a matter of fact Persian Princess (as rich as Louis Bel) is the only out cross I have seen recently, and even a young plant of that was in good form this spring.

In considering the relatively few new things I have seen it seems well to roughly group the varieties by color.

Whites:

ARGENTINA (Mohr) which closely parallels Micheline Charraire is even more unreliable in the quality of its bloom.

EASTER MORN (Essig) has been grand for three years now with its beautifully flaring falls, its lack of conspicuous haft reticula-

tion and all round quality. Last year, near Chicago, I also saw it in perfection in a private garden. VENUS DE MILO (Ayres) is a surprisingly close pocket edition.

NATIVIDAD (Mohr-Mit.) should, I suppose, be listed among the yellows as it is a warm ivory of almost velvety texture.

NEW ALBION (Essig). A delightfully crisp blue-white and very pure.

PURISSIMA (Mohr-Mit.) is that blue-white which shows up so wonderfully in a show.

SHASTA (Mohr-Mit.). An older blue-white that is almost forgotten.

SITKA (Essig). A blue-white comparable to Wambliska but with more flaring falls and even finer height and substance.

SWEET ALIBI (White, C. G.). Like Natividad, more yellow than white due to the amber yellow heart. This was described as "Ivory" in 1932 and received an H. M. Its exceptional texture was noticeable even on a first year plant.

Yellows:

I am frankly prejudiced against many of the new so-called yellows they are so pale and so often of a greenish hue. To find W. R. Dykes and Desert Gold not even registering $\frac{1}{2}$ strength of the lightest Ridgeway tone is at least disappointing. Lady Paramount did not bloom in New England this year but Sweet Alibi is said to be similar and it is certainly richer looking than Desert Gold.

ALTA CALIFORNIA (Mohr-Mit.). An olive yellow (rather dull) with a marked flush on the fall. A greatly improved Endymion and I like its sleek form.

CALIFORNIA GOLD. A new plant seen after a hard winter but the color a rich Empire yellow and the form excellent.

MIRASOL and RAYO DE SOL, I just do not like though they are dark.

PRIMAVERA (Mohr-Mit.) is an old, very early flowering (and hence worthwhile) variety of size without height.

RAE (Lothrop). Ivory deepening to amber yellow in the center—a nice flower.

SOLEDAD (Mohr), very early, far from large but a good clean yellow. I still like it.

SUNOL is generally considered finer than California Gold perhaps, but it is less intense and I am tempted to call it a vastly improved Alta California. I rated it at 89.

YELLOW PEARL (Salbach) was not deep but of lovely substance and promising.

Blues:

I still want small blues like Bluet, Joya, Corrida, Jacqueline Guillot, Sensation, but I want also some of the big new up-standing things which really do surpass the old pallidas completely and particularly so as selfs. The new Shining Waters is as pale as the older Pale Moonlight, which won a medal as the finest stalk in the 1933 Boston Show, and both are well named. Pacific is a bit darker and then only slightly darker but varying shape and carriage come Blue and Gold, Sierra Blue, San Diego (the only one not an Essig seedling) and Osprey (Berry) with its more conspicuous haft and beard. Blue Gown, as I remember it is deeper and Paloma shorter stalked but as dark while Modoc is so rich as to be called a purple. I should like to see neighboring clumps of Modoc, Motif, and Meldoric for comparison. Except for California I question whether we need these light toned ones except as an occasional high spot. The Essig seedlings however do give unusual uniformity of tone.

Others:

I seem to have made few notes as to darks and blends. They are difficult to remember, one from another, at best; one is a bit pinker, the next redder, and the third duller in either standard or fall. Think of neighboring clumps of Duarte, Mary Geddes, Coralie, Trails End, a few other beauties and, in a short time, where are you? Hollywood (Essig) belongs here though it is taller and much pinker. Bronze Beacon (Salbach) is much richer in tone than these and verges towards the variegata-blend Picador. Senorita (Mohr-Mit) is pale suggesting the ancient Dalmarius in its contrast of cream buff and lilac while Red Flare (Milliken) has velvety deep Bordeaux falls which brings us into the range of Indian Chief, Dauntless, etc. I wonder. Does California prefer blues and light tones or does the balance of the country prefer blends and darks and reds or is it still a matter of getting certain colors linked with certain strains that like the climate.

Pinks:

ROSADO (Mohr) was as I remember it darker than Imperial Blush or Airy Dream but it had height and size and even better form. FREIDA MOHR (Mohr-Mit.) is useful despite its ungainly form and the color rather telling.

Plicatas:

Though San Francisco with its frilled standards was the first big plicata to be seen in the East I think we all prefer Los Angeles with its color concentrated more at the center. Sacramento is too darkly flushed and dotted to interest me much but they all mark a big step upward in height at least over True Charm and True Delight or the still older Anna Farr and Camelot. Plicatas do not normally serve as reliable parents but in other respects one of this lot is as much of an advance as Caterina, Alcazar, Shekinah or Dominion in its day.

Ten years ago I was writing about what the use of *trojana* and *cypriana* had done for height and branching and size as exemplified in Lord of June, Lady Foster, Caterina, Asia, and Mme. Durrand. There were many big blue bicolors, a few blends. The Dominion Race was developing and its stocky, close branching is still to be found all too apparent in many of our new darks. We have had a period of rich Dominion progeny. We are in a sea of good blends both light and dark. We have made enormous progress in the plicatas, in whites, in light yellows and California is well in the lead in all of these groups, if we consider quality and do not stress ability to withstand cold and neglect. In my opinion we are still striving to divide intensity (as found in Cardinal, Blue Velvet, Thuratus or a real variegata) from a tendency towards lack of height and size and adequate branching. I have just finished a hundred odd careful descriptions of such novelties as our bad winter left us and again and again a goodly number of branches have been so short and placed at such an acute angle with the stalk that the opening flower hits the main stem if not its neighbor as well. If the season be cool and the flowers open in succession, a close-branched stalk may possess splendid poise but a few hot days bring crowded spikes of bloom.

The 1934 winter was wicked in New England. There was below zero temperature and bare ground, again after an ice storm, and again with snow. Where ice gathered in slight hollows the loss was almost 100 per cent of bloom and sometimes that high of stock. And in such a location the old pallida-variegatas went as thoroughly as the $\frac{1}{2}$ Cyprianas or Trojanas. Probably every breeder in the country has a majority of seedlings with a percentage of so-called tender blood. The weaklings among the seedlings and among the introductions drop out. Why can we not publish the possible influence of certain parents but forget re-

gional differences and value our irises for their intrinsic quality? In a few years some varieties will be everywhere and others only in certain gardens but each will reveal its own individual perfection.

Miss Sturtevant has grown these questionable varieties in the open garden as long as anyone in the country. She has failed with *mesopotamica*, with Marian Mohr, occasionally with Asia, J. B. Dumas, Micheline Charraire, or Lady Foster but she has succeeded with the great majority.

An Iris Jaunt. *By Mrs. Thomas Nesmith*

■ In the early part of May I started on an Iris Jaunt, taking in some of the southern and middle states gardens, finally ending with most of our New England gardens, and I have been asked to give you brief notes on some of the irises by which I was especially impressed.

My first visit was to Nashville, Tenn., where I arrived May 10th, and found the bearded irises in full flower. Several other iris enthusiasts were there when I arrived, more came each day, until there must have been at least twelve of us, busily engaged in looking over the new seedlings of Dr. Kirkland, Mr. Connell and Mr. Washington. We found many new and lovely irises, some which were blooming for the first time, as well as others which had been selected in past years as being of especial merit. There were also splendid displays of their own named introductions.

The garden of Dr. Kirkland was a mass of glowing color, with a surprising amount of white, yellow and copper toned irises, with here and there new reds, deep blues and many lovely blends. The following notes are of some that most impressed me.

LITTLE AMERICA, a new pure white iris of excellent form and texture. It seems to be the most white of any of the newer irises.

AT DAWNING, this seemed even better than when I discovered it among the seedlings of last year. A tall sturdy iris of arbutus pink tones, with standards lighter than the falls; the flowers have a thick firm substance and are carried on strong well branched stems.

SATAN, a deep blue-black iris of strong growth and good height, much darker than BLACK WINGS. Different judges commented on its fine form and deep velvety substance.

COPPER LUSTRE was just as splendid and outstanding as in 1933. The coppery tone of this iris is a new break in color and I have been told that the California iris BROWN BETTY is nearest to it in hue.

JUNALUSKA, a flower of rose, gold and copper; a subtle blending of color which is difficult to describe.

AZTEC is a brilliant gold and coppery blend with intense gold in the throat of the flower; the nearest to it is SPOKAN (J. Sass).

Dr. Kirkland has a series of these new coppery toned irises. Among them being, OJIBWAY, ORILIA and MAGNETAWAN. He also has some very lovely yellows, one which we especially noted, has excellent form and substance and will be registered this year. FEARLESS is a red-purple self with well formed flowers, the glowing color gives it great garden value.

Mr. Connell has several seedlings of great promise growing at Dauntless Hill as well as in his town garden. Among them is one called FROST FAIRY, an ice-blue self of almost pure white tone with very heavy and smooth finish.

BLITHESOME, a beautiful soft yellow flower of almost velvety substance and excellent form with well branched stalks. This iris is attracting great attention.

PARTHENON, a tall and stately white with semi-flaring falls and domed standards; flowers have very good substance, the stalks are tall and well branched with many flowers which bloom over a long season.

In the garden of Mr. Washington we find not only bearded irises of fine form and color, but his years of patient work in selective breeding of the Southern States irises as well as the spurias have resulted in two new series of beardless irises which are extremely hardy in our northern gardens and much more beautiful than any of the species which are in their parentage.

Of the newer bearded irises which Mrs. Stahlman and Mr. Washington have produced, the following were noted by visitors and especially commended.

JEB STUART was pronounced by many as the finest deep brown-red, with black overtone upon the falls and intense orange beard; forty inches tall with low branched stalk.

PEER GYNT, a large flowered plicata with flaring horizontal falls; lighter in tone than SACRAMENTO and an entirely new type of plicata.

STONEWALL JACKSON, a rich velvety red variegata with intense coloring and excellent form; of great garden value.

BETTY NESMITH, a rich buttercup yellow flower of perfect shape and size, with just a faint flush of bronze upon the falls; flowers of heavy substance and smooth finish borne on well branched stalks.

CAVALCADE (name to be approved). Intense rose red with copper undertone; flowers of especially fine form and substance on low and widely branched stalks; 17 flowers and buds counted on one stalk.

MAYA, a deep strawberry red with background of bronze and copper, intense orange beard; falls deeper and very velvety.

WILL O' THE WISP (name to be approved). A large yellow and white bi-color, with standards of yellow and falls almost pure white; tall and well branched.

There were many lovely hybrids of the Southern States irises which were blooming for the first time, as well as those which have been named in recent years. All visitors were greatly impressed with their beauty and superiority over the species of this type of irises.

The hybrid spuria irises were really a revelation for most of us have been accustomed to the older forms with tucked under falls and somewhat twisted standards, but these have straight flaring falls and smooth well placed standards. Some are pure white, others in cream tones, as well as blue and lavender selfs. One that attracted great attention had large velvety falls of yellow with almost white standards, another of pale hazy blue with golden bronze blended with smoky blue on the falls. These and the Washington hybrids of the Southern States irises must be seen to be appreciated for they bring entirely new breaks in color. They bloom after the bearded and just before the Japanese, thus giving great extension of the iris season.

Mr. T. A. Williams of Nashville, has a new garden of irises, planted in color harmony which is quite delightful, and I noted some seedlings that seemed to give good promise. One that seemed more wine colored than JOYCETTE, and another of clear magenta tone.

Mr. Geddes Douglas is a new hybridizer of irises, but he has one of entirely new color, a true self of Pompeian red tones and very delightful.

I had hoped to go to Lincoln, Nebraska, for the Annual Meeting of the A. I. S. and to see the irises of Mr. Hans and Jacob Sass. Many of which I grow in my own garden and greatly admire, but it would have been a pleasure to see their large number of named varieties as well as the new seedlings growing in their own gardens, but much to my regret, the change of date of the meeting made it impossible for me to do so.

From Nashville I went to Cincinnati where I had intended to see the irises of Dr. Ayres, but before leaving Nashville, another iris enthusiast told me that he had a telegram from Dr. Ayres saying his irises were through blooming, and as my stay in Cincinnati had to be of short duration, I paid a hurried visit to the garden of Mrs. Emigholz, where I saw ROBERT and CADMIA, two beautifully yellow irises of fine form and substance with tall and well branched stalks. It is hard to say which is the better for they are both excellent. CLAIRE DE LUNE is a charming blue which was in full flower. THEODOLINDA, NINGAL and NANOOK were growing in great profusion and were in better form than I had ever seen them and were a pleasing surprise.

My next iris visit was to Ft. Wayne, Indiana, to see the garden of Mrs. Franklin B. Mead where I had the pleasure of meeting Mr. Riedel. He has collaborated in hybridizing with the late Mr. Franklin B. Mead for several years and he showed me the beautiful new seedlings and recently named varieties which were blooming at Iris Crest.

Both Mrs. Mead and Mr. Riedel were kindness itself, but I could not help the feeling of great sadness which came over me when I saw that beautiful garden and realized that Mr. Mead was no longer there to enjoy all the wonderful color harmony which he had created and which he loved so intensely.

As I entered the iris garden, I had my first sight of EROS and it is breath taking in its beauty, a beautiful warm pink with yellow undertone and no trace of lavender pink about it. I cannot recommend this iris too strongly for it is the finest pink to date.

WHITE NILE is another outstanding iris from this garden. A magnificent white plicata of LOS ANGELES type, but even more beautiful and very hardy and prolific; 12 to 18 blooms on each well and deeply branched stalk, forty-six inches tall.

I saw several others that seemed of great promise, MOZAMBIQUE, a rich dark purple; RHAGES, a dark violet plicata of very smooth

finish; MINOAN and FLORESTAN are two excellent irises which I should judge might have KING MIDAS blood for they are rich in tawny bronze and gold tones.

From Ft. Wayne I went to Bluffton, Indiana, and found Mrs. Williamson and her daughters just as charming and hospitable as ever, but here again was a feeling of sorrow and loss for Mr. Williamson was no longer there to greet me and I missed his helpful advice and comments on iris matters. Mary and Jane Williamson are carrying on splendidly and when one sees their vast field of perfectly grown irises, the thought comes of how pleased their father would be if he knew of their interest and painstaking care of the irises which he has produced.

Those of newer interest which especially appealed to me are the following. CHAMITA, an iris of distinct bronze-brown tones, deeper than any iris of this type, large well shaped flowers on good sturdy stems. I liked it very much.

ADOBE, an unusual blend of buff and pompeian red, which at once attracts attention. MOONGLO, a rich yellow and copper blend of pleasing harmony giving an effect of etruscan gold which is entirely different.

CASTALIA, sky-blue in tone, with arched standards and broad falls, of great garden value. AMIGO, a blue-purple bi-color with a delightful light edge around the deep velvet falls which makes it quite different from others of this tone.

SUNDIPT, a larger, deeper PLUIE D'OR and has immense garden value. I also saw a very fine deep red with exceedingly velvety falls which seemed quite different in tone from ETHEL PECKHAM. This may be named for Mr. Williamson.

I made a brief visit to the garden of Mr. Paul Cook and found some very good seedlings which are as yet under number. One a splendid deep velvety black-purple that should be introduced. There were also two with blue beards and deep velvety blue color which especially appealed to me; one not large and essentially a border iris, the other very dark blue and of excellent substance and form. He has some nice irises in pink tones and pinky yellow blends that seemed worthy of further notice. Mr. Cook is doing work with the *hemerocallis* as well as with irises and I am looking forward to the flowering of some of his in my own garden.

When I reached home on May 29th, I found my own garden rapidly coming into bloom, but owing to our extremely cold winter at least seventy-five new varieties which should have flowered had lost their bloom stalks. This does not apply to the irises from any one region, and was no doubt due to our 26 below zero weather with not much snow at the time, but an ice sheet four inches thick over most of them. Other gardens in New England suffered in the same way on the newly planted varieties so I cannot give reports on many of the newer kinds.

GOLDEN HELMET (J. Sass) bloomed and is a splendid flower with bronze gold standards, quite ruffled; falls of rich copper-red coloring.

AVONDALE (H. Sass). This iris attracted great attention and I describe it as an almost fuchsia red self with an exceedingly heavy yellow beard.

ALTA CALIFORNIA (Mohr-Mit.), a tall yellow with well formed flowers, did not show as much bronze on the falls as last year.

ECLAT (Gage). A lovely yellow blend on tall graceful stems, great garden value.

GOLD FOAM (Nesmith). A deep golden iris, all yellow with no other color in any part of the flower; ruffled.

GOLD VELLUM (Gage). Medium yellow with very heavy substance and good form, a good iris for border planting.

IMPERIAL BLUSH (H. Sass). A beautiful iris of pale lavender pink tone, a great addition to the paler pink class.

KING PHILIP (Fewkes). A handsome blue with violet undertone; very sweetly scented.

LADY GAGE (Gage). A white iris with well formed flowers and smooth finish.

MALUSKA (Nesmith). Said by iris judges to be the darkest velvety self to date. (Wash.-Stahl.).

MARY GEDDES (Wash.-Stahl.). As always the center of attraction in the garden.

MME. RECAMIER (Wash.). A beautiful and dainty pale pink and yellow blend.

BRONZE BEACON (Salb.). Well described by the name; golden bronze standards and velvety Indian lake fall; tall, well branched.

THISTLEDOWN (Sturt.). This iris has the effect of a large ruffled white and was well liked.

GUDRUN (K. Dykes). The largest white iris that I have ever seen; good substance and form, an outstanding iris.

SUNOL (Mohr-Mit.). A yellow blend with very heavy substance, tall and well branched.

CALIFORNIA GOLD (Mohr-Mit.). A deep gold iris of medium height and better substance than W. R. DYKES. This was a first year plant and no doubt will be taller another year.

HAPPY DAYS (Mohr-Mit.). The largest deep yellow to date; does not have the fleck of W. R. DYKES and also has more substance; first year plant.

MONOMOY (McKee). A gorgeous tall dark blue-purple of excellent form and size on well branched stalks; excellent.

MISS JUNE (McKee). A large blue self with horizontal falls and well domed standards; good branching.

SHINING WATERS (Essig). One of the best of the Essig blues. Tall and well branched.

TENAYA (Essig). A splendid rich velvety dark purple self; tall, well branched and of excellent substance.

POMONA (Gage). A deep coppery red of splendid substance and form. A new iris that attracted much attention.

GOOD CHEER (Sturtevant). A large well formed variegata type iris; very yellow standards with bright rose-maroon falls. Might be called a better CITRONELLA as to size, form, and color.

NAIAD (Sturtevant). A lovely blend of Zaharoon tones, but deeper and better.

PURPLE EVE (Tobie). A large purple-red bicolor of good form and substance, well branched and stands out in the garden.

SPANISH GOLD (Tobie). A pale yellow iris of excellent form; very flaring falls with well domed standards on well-branched stems.

I am sorry not to be able to give reports of other new irises which are being grown in New England for so few bloomed this year, but even with the severe winter almost none of them was killed outright. It may be of interest to know that the Washington hybrids of the Southern States irises were thoroughly hardy here in New England.

Of the unnamed seedlings of promise which were noted, were a very lovely yellow of Miss Sturtevant's, two tall dark seedlings of Mr. McKee's, showing Dominion parentage, a pale olive cream of Mr. Washington's, which might be termed a taller, larger, and more brilliant DOXA.

Iris Rumors in Southern California

■ It is rumored that:

In its class SAN GABRIEL still stands supreme.

In spite of all the new white irises PURISSIMA does not have to take a back seat. Being plentiful her lovely white flowers were picked and carried to the newer varieties where in comparison she lost but little of her prestige.

NEW ALBION appears with San Gabriel and is lovely in the same planting. It blooms on slender wiry stems with plenty of branches to show off the graceful white flowers. Even if it were not so early it would be desirable.

Two stems of WAMBLISKA bloomed in Southern California. They were about eighteen inches tall, close branched and with flowers that belie its name. One of the plants has been moved to the mountains to see what it would do there.

EASTER MORN was seen on fifty-two-inch stems carrying five branches—the first low and wide so that the blooms were marvelously displayed. The flowers were six inches wide and five and a half high. The petals were broad. It was superb but one irisian of note did not like the domed standards and flaring, almost horizontal, falls and another irisian of note did like just that!

ANOTHER DAY is a pearly white with fine green veins by the side of the wide cushion of a beard. It is low and widely branched with broad, round petals. This iris began blooming February 2nd (before San Gabriel) and after blooming freely for some weeks, took a short rest then brought forth a second crop of flowers with the late irises.

DUE WEST is a superlative white iris in form, in stem, in grace and in color. It is forty-four inches tall with flower five and one half inches high and five and a half inches wide. This iris will please those who do not admire the low, wide form. This iris also preceded San Gabriel in time of blooming.

EMBASSY bloomed with San Gabriel and Purissima. It is an impressive white iris. The tall stem had many short branches with flowers the size of Easter Morn. The flowers had thick substance and a glossy sheen. The styles were flesh pink.

Every one is glad that the iris bearing the name, NATIVIDAD, is such a beautiful iris. The forty-six-inch stems are perfectly branched and carry with dignity and grace the large flowers of pale yellow. The marvelous golden beards match the gold in the wide hafts.

SWEET ALIBI is greatly admired by those who have watched it bloom these three years. It, too, is a large pale yellow with deeper color in the haft. The petals and hafts are broad and the substance remarkably heavy. It is very rapid propagator and a free bloomer.

LADY PARAMOUNT was not so tall this year but she still radiated charm. She continues to come clear in the South though flecks on her falls were reported from the North.

An Eastern visitor was quite bowled over by HAPPY DAYS. He said it was as large or larger than El Capitan but regretted that the stem was only thirty-four inches tall which made it too large for its height. Another visitor said there was a suggestion of flecking on the falls. There is almost a universal suspicion that all yellows may possess a recessive trait toward this flecking.

SHINING WATERS is a very large, very tall iris on a well branched stem. The color is a deep, clear lavender self.

SANTA FE inherits from Kashmiriana, through several generations, most remarkable texture and substance. It also possesses beautiful form but unfortunately its pale lavender color fades in this hot sun to a dirty white.

SOMEBODY, is the name of a very satisfactory light violet iris. It delights in sending out a multitude of new roots to support flower stems. The stems themselves and flowers are beautifully arranged. The color, the frosted surface, the heavy substance, the broad petals, are all that anyone could desire. It began blooming in January and continued well into April.

EARLY MASS reminds one in form of Sante Fe. It is also a light violet but it does not fade. It bloomed on graceful stems 47 inches tall. It has outstanding grace, beauty of form and poise, besides beautiful color.

FAIR ENOUGH, is much bluer than Somebody and bluer than Sierra Blue and Shining Waters. It is a stunning iris on splendidly branched forty-two-inch stems. The immense petals are round. A surprising number of flowers are stored in each stalk. In one garden its first flower opened February 10, in another garden February 12, and in a third February 14, showing that it certainly is an early iris. In one of the gardens it was in bloom eight weeks.

PALE MOONLIGHT continues to be a favorite. Some claim that it is superior to Sierra Blue. It grows on tall stems with good branching. The flowers are large and of beautiful form.

SIERRA BLUE, besides being very large, has considerable distinction in form and in its surface texture. A well grown clump is a breath-taking sight. The texture is so close that the flower has almost the appearance of having been lacquered. It is late blooming.

ROYAL SALUTE is a fine iris in a deeper tone. It resembles Mad. Gaudichau though by actual comparison it was thought to be a shade bluer. It is much taller and larger. Gaudichau and California Blue are its parents.

ACROPOLIS may be an iris for Californians only but it is certainly gorgeous here. In one clump two stems were noted fifty-two inches tall, each stem having six giant open flowers! it is a blue-purple bicolor with velvety falls.

Eastern and California judges had only praise for UKIAH. It is rich and dark with dark changeable silk standards and brown-red velvety falls. The form and branching were ideal and it bore the intense heat with remarkable equanimity.

The less said about BALDWIN the better. It, too, was condemned to the mountains.

INDIAN CHIEF bloomed profusely on rather low sprawling stalks. It lacks distinction and many other qualities.

DAUNTLESS has characteristics in common with Indian Chief. The color is muddy.

RONDA may be a good parent from which to procure reds (?) but for brightness of tone is superseded already by many seedlings in several gardens.

RUBEO is attractive and was seen in fine form but it certainly lacks vigor.

MAUNA LOA has now been well distributed and one can see its bright color in most California gardens. It is almost as indispensable as San Gabriel. It blooms early, following closely San Gabriel.

Of all the eastern irises there is none that performs with more gratifying regularity than SEQUOIAH. Perhaps it is on account of its name—it feels that it “belongs.” Always there is an abundance of large rich flowers on tall stems and visitors exclaiming over “that beautiful iris.” As a parent it is only so-so. The slight fading of color at the edge of the falls and the scarcely discernable line through the center of the falls are quite dominant in its offspring—giving at times very lovely effects, it must be confessed.

The blooming of AIRY DREAM on tall slender stems led to the hasty discarding of an assortment of "pink" seedlings. It was lovely, an airy dream, for sure!

DAY DREAM was disappointing. It seemed to exhaust its wealth of color in producing unusual length of stem. It has been such a contrary season; tall stems on short irises, short stems on tall irises, crooked on straight and straight on crooked!

Since the first two years of California residence AMBROSIA has not produced the stems that it should. But the flowers are so beautiful that hope is strong that in time it will become acclimated.

It is reported that BEAU SABREUR flops its standards in the east. How peculiar that in this hot climate they stand up like three miniature palm-leaf fans with their tips touching and never think of falling. It is a beautiful iris though not tall.

The color of ZUNI is unusual but it is not remarkable nor excellent in any other particular.

TAPESTRY, too, may claim to have "different" color but it is not distinct nor particularly beautiful.

With the blooming of CAVATINA all of Don Quixote was promptly cast out as in color they are very much alike and Cavatina is superior in every way.

CINNABAR is good. A dependable iris has greater value than is indicated by the score card. Cinnabar is blessed with that quality in addition to beauty of form, of stem, of color, and of texture.

GIFT is also dependable. It is tall on slender, wiry, graceful stems. The standards are bright brown with gold over-tone and the falls are carmine velvet from edge to edge and up into the haft.

A short stem of CORALIE was seen and the color admired. DEPUTE NOMBLOT was viewed in the same fashion and considered interesting—possibly.

ALTA CALIFORNIA was the best it had ever been seen—on thirty-six-inch stalks. It is a dull, opaque yellow.

ZAHAROON does not have very good form, and substance and texture are absolutely lacking. It was sent to the mountains.

AURIFERO is one of the loveliest of irises. With its tall beautifully branched stems and beautifully formed flowers of light blue and gold it will be grown when many of the 1934 introductions are in the discard.

THE FAMILY TREE

■ To anyone who thinks the crossing of two good irises is not "breeding" I would commend Webster whose definition reads: "The act of bearing or producing." Those who still prefer to call a multiplicity of crosses preceeding the production of a good iris "breeding" can usually find a record of some of the grandparents and perhaps great-grandparents. (If growers were more careful of their records and were willing to divulge them this would more often be possible.) That the one who produces the good iris should also have produced all its ancestors is as ridiculous as it would be for a scientist to sit in his mother's kitchen and watch the teakettle boil or lie on the ground in the orchard and see an apple fall.

It was my privilege and joy this season to help with the recording of some two hundred seedlings at Whitehill which are to be saved for further observation. One fourth of these were yellow selfs and most of the others yellow blends.

The production of yellows at Whitehill began in 1932 when Dykes pollinated by Aurifero produced Lady Paramount; and Dykes pollinated by Mirasol produced Son Robert and Brother of Bob. This last bloomed from the tips of all four of its rhizomes and died, but children from its pollen were blooming this year. I am mentioning these irises at this time because they are largely responsible for the crop of 1934 yellows.

In the ancestry of Lady Paramount one finds that the male parent, Aurifero, is descended from Marian Mohr crossed by an unknown, crossed by Sherbert. Judging from the height of Aurifero and the fact that it does not perform well in the east I would venture that its unknown grandsire was *mesopotamica*. But it is possible that its height and climatic preferences came from an early ancestor for there is really quite a good deal of "breeding" in this line. Marian Mohr is the result of a cross of Miss Willmott \times Carthusian and Miss Willmott was produced by Sir Michael Foster at Shelford from *cypriana* and *Kashmiriana*. Carthusian also carries that eastern blood for it resulted from a cross of Dalmatica \times Ricardi. Here we have about reached the end, or perhaps one should say the beginning, for both Dalmatica and ricardi are collected forms of iris as are also *cypriana* and *Kashmiriana*.

On the Sherbert line we do not get much satisfaction as it comes from Caterina \times Mrs. Horace Darwin, both produced by Foster. Caterina has *cypriana* for one parent so here is another injection of that eastern strain.

Of the female line of Lady Paramount I know nothing. I have heard rumors that Shekinah was used in the production of W. R. Dykes and recently other rumors have intimated that Moonlight was one of its parents. This is hard to believe as not one of the hundreds of Dykes descendants that have come under my observation have shown the least resemblance to the pronounced form of Moonlight. It is pointed out that one can see flecks in the falls of Moonlight. These flecks wherever they appear, are the inheritance of a variegata parent and as all our yellows must come originally from variegatas the natural conclusion is that yellows from whatever source or wherever produced may at times show these traces of the dark fall. The fact that Moonlight has them and also W. R. Dykes does not prove relationship to each other except through the variegata factor.

So far, in Southern California, Lady Paramount has not shown this tendency but reports from Berkeley say that there the falls were flecked. Son Robert, inheriting variegata from both parents has since its first blooming been considerably marked even in its home garden. Its pollen parent, Mirasol, came from the crossing of two of the Mitchell seedlings; one, Shekinah \times Argentina, the other Mme. Neubronner \times Marian Mohr. There is also some "breeding" in this line for Shekinah was Hope selfed and Hope was a child of (Pallida \times Aurea) \times Celeste. The yellow iris in this trio was aurea and it was produced in 1830 by Jacques but its antecedents and those of Mrs. Neubronner are wrapped in mystery.

Among this year's good yellow seedlings were:

One from Dykes \times Mme. Cheri. There were several yellows of this cross but only one was considered worthy of being recorded. Its stalk was tall and high branched, the hafts broad and falls flaring. Standards were Citron yellow and falls, Wax yellow.

Vishnu \times "a yellow" (this was either Mirasol or Dykes) proved to be an interesting cross. Fourteen of these seedlings were saved for further observation. The form and veinings of Vishnu was dominant in most of the seedlings but one was a pure yellow self even to the styles and the hairs of the beard and another with thick magnolia-like texture and broad petals, was

Pale Chalcedony Yellow and a third with the same remarkable substance and texture and broad flaring falls was the bright Lemon Yellow, a self, with deeper veins over the blade of the fall. These seedlings were about thirty inches tall. It is with difficulty that I refrain from telling of the copper tinted iris and the salmon tinted iris that came from this cross.

Doxa × 3M61 (a tall Mitchell yellow) brought seedlings of dwarf stature with broad flaring falls. One pale yellow was reserved.

Son Robert × *Urmiensis* produced nothing but yellows. Five, ranging in height from thirty-four to thirty-eight inches were kept for another year. Two of them showed evidences of their oncocyclis parent in the cockled surface and puckered edges of the standards. The colors were clear and luminous. An Amber yellow self and a Wax yellow self were the deepest shades.

Druid × Alta California did not produce the tallest stems but the yellows were dark. One which was difficult to Ridgeway had deeper—than Wax yellow standards with still darker falls. Another of this cross had Lemon yellow standards and Lemon chrome falls—two of the brightest yellows in Ridgeway.

Picador × Lady Paramount. All of the petals of No. 1 of this cross measured three inches by three inches. Very broad hafts and flaring falls decorated the Pinard Yellow seedling. No. 2 was another huge flower in light yellow. There were three other good yellows of this cross of deeper and brighter tones but not so large. The stems varied in height from thirty inches to fifty inches.

The characteristic of the Sequoiah × Son Robert seedlings were their broad hafts and petals. The stems showed different types of branching and they were medium in height up to forty inches. The yellows were pale in tone.

Dykes × Druid was a combination that yielded plants with very tall stems and many of them. The notes read: “No. 2. Picric yellow self—three stems forty-nine inches tall. Flower five by five.” “No. 3. Five stems 48 inches high on this seedling which was set out only last May. Six buds besides three flowers in sight on one stalk. Lovely poise and form. Clear color.” “No. 4. Intense deep yellow, forty inches tall. Broad hafts and petals.” “No. 6. Five tall widely branched stems. Flowers and stem well balanced. A bright yellow. No. 10, and 11, were tall and large but not so deep in color. No. 12 was Amber yellow on a fifty-two-inch stem and No. 14 was a light yellow.

Son Robert × Dauntless produced a pale creamy yellow with bright veins and beard; and a seedling in Lemon chrome. This last iris apparently had white veins in the haft. I noticed this distinctive feature in several of the rich yellows. The color of the fall was carried up into the haft but a tracery of veins was left without pigment hence white veins. It was very attractive. I think not one of these seedlings listed had brown veins in the haft.

Mad. Durrand × Brother of Bob gave a lovely pale yellow on a tall widely branched stem.

Dolly Madison × Dykes. The only yellow seedling was of Dolly Madison type and size. A Primrose yellow self.

Gold Top × Brother of Bob was responsible for one of the best bright yellows in the garden. There were three, well branched, forty-six-inch stems and the flower was five by five. It was a rich Lemon chrome self. Two other fine yellows resulted from this cross—they were Citron yellow.

Gold Top × Mirasol produced nice yellows on stems up to thirty-six inches. One was Lemon chrome, another Wax yellow, and a third, Strontian yellow. All of these colors are the brightest in their particular column in Ridgeway. Gold Top looks interesting as a parent of yellows.

Dauntless × Mirasol gave irises not tall or large but having lovely form. One was Amber yellow even to the hairs of the beard and another was Citron yellow.



From left to right: Mrs. Lena Lothrop, Mrs. F. F. Williams, Mrs. F. E. Reibold, Mrs. C. S. Milliken, Mr. C. G. White, Dr. H. H. Everett, Mrs. Everett, Mr. C. S. Milliken, Mr. Robert Schreiner, Mr. F. E. Reibold, Mr. J. N. Giridlian, Mr. Jesse Nichols, Jr., Commander J. A. Monroe.

THE VOCATIONAL GUIDE

■ DR. S. STILLMAN BERRY was born in Maine and his childhood was spent in various parts of the east and in Montana, Arizona and California. After graduating from the Redlands High School he took his undergraduate work at Stanford University and later received his M.A. degree from Harvard and his Ph.D. in zoology from Stanford. He is a member of Phi Beta Kappa, Sigma Xi and a Fellow of the American Association for the Advancement of Science; he also holds membership in various American and foreign societies. Dr. Berry has done work for the Smithsonian Institute and has written on numerous scientific subjects, is on intimate terms with devilfish, squids and snails, and has large collections of these specimens. Another of his hobbies is the collecting of rare books.

Dr. "Berry's garden" is a Mecca to which many lovers of flowers make pilgrimage every year. It is a garden riotous with colorful blooms among which daffodils and iris predominate but which contains also a very large variety of other rare and beautiful plants. His best known irises are Cacique, Mauna Loa and Acropolis. Dr. Berry's garden is an expression of his own personality and upon it he lavishes his skill and enthusiasm. He has done much to stimulate amateur gardeners by showing and explaining his garden to all who are interested. He inspires others with his passion for flowers and trees and many gardens bear the mark of his encouragement and example.

MRS. JEMIMA BRANIN. (*An interview, February 28, 1934.*) Born in a suburb of Edinburgh, Scotland, August 18, 1845, Mrs. Branin was brought to America in 1847. At the age of four years and nine months she was given an iris root. This was the beginning of her interest in irises.

The next contact was with the wild irises in West Meadows, Connecticut. They were in two shades of blue, yellow and white. From then on every opportunity to get and to grow iris was improved but there were not many opportunities until she came to California in 1864. From then until 1881 her iris growing was that of a busy housewife. In 1881 she and her husband and children came to San Lorenzo to live, bringing her irises, of course.

In 1884 she heard of Barr and Sons through an English friend and sent to them for iris roots, and continued to import them at from 2½ pence up to 6 pence each. These came by sample post packed two in a box.

The first society of flower growers that she belonged to was the California State Floral Society which granted her the gold medal offered by the Cox Seed Company of San Francisco for the best iris collection at the 1902 Flower Show. This was the first gold medal given for iris in the world. Mrs. Branin's collection was composed of 45 named and 2 unnamed varieties.

She sowed iris seed for the first time about 1887. After this she was continually trying out experiments in cross fertilization. Her first named iris was "Maid of the Mist," the parents of which were *cengialti* and "an old blue flag common everywhere and name unknown."

About 1887 she began raising spurias from seed. She first used *ochroleuca* pollinated by itself and got several variations, some of them being improvements on *ochroleuca*. Next *Monnieri*, self-pollinated brought a variety of yellow spurias; California, a light yellow; Golden Gate, a large deep yellow; Golden State, a large deep yellow with ruffled petals, and Rose Colby with still larger flowers but not quite so tall. *Monnieri* crossed by *ochroleuca* brought Alice Eastwood and Elizabeth Teubert which is on the same order as Alice Eastwood but deeper color. Mrs. Mary Nugent also came from this cross. It is a deep yellow. A. J. Balfour crossed by a spuria brought Nellie Stuart a pale blue with orange spot.

Mrs. Branin's work has never been commercialized. She always gave to her friends. In a very few instances she sold roots to strangers.

Today, growing in the Royal Horticultural Gardens in England are Alice Eastwood, Golden Gate, Golden State, Rose Colby, and Nellie Stuart. The gardener reports them as doing well and adds. "Whatever they win, I will send to you."

I was interested to learn that she gave to Mr. Mohr his first yellow iris.

Besides the gold medal, Mrs. Branin has won eight silver medals with her flowers at various flower shows. Three of them were awarded to irises.

MRS. JENNETT DEAN possessed a natural love of flowers which was cultivated by the grandmother with gifts of seed from her own old-fashioned garden.

About 1892 there came into the young woman's hands a booklet, "Hardy Flowers Worthy of Culture," issued by the B. A. Elliott Company of Pittsburgh. It contained a longer list of "German irises" than she supposed existed. Mad. Chereau, Queen of May, and Crimson King were purchased and when she came to California two years later the irises came with her for she hoped, in coming to this "land of flowers," that she might have a garden here.

Through a friend in Ventura she met Mr. Dean, the horticulturist then in charge of growing trees and plants for Los Angeles city parks. Mr. Dean owned acreage in Moneta, a little place between Los Angeles and the ocean, and here they made their

home—her dream of a garden come true. Queen of May, Mad. Chereau, and Crimson King were planted and as they increased the roots were sold to the Germain Seed Store at \$1.50 per hundred!

In 1907 there appeared in *The Florist Exchange* a paper, "Notes on the Iris" by J. Woodward Manning which had been read before the Massachusetts Horticultural Society. This article had a deep influence on Mrs. Deans' later life. She wrote to Mr. Manning to learn where she could obtain some of the varieties he mentioned and he gave her addresses of growers in England, Holland and Italy. She imported irises. She procured "The Book of the Iris" by Mr. Lynch which was not only read but studied. About this time Mr. Farr began to advertise and she bought from him and from Mr. Harrison of Nebraska, and Mr. Peterson of Chicago, and from Miss Sturtevant. She had more than three varieties now and the Moneta home became The Dean Iris Garden with a little price-list which was first issued about 1910.

Other growers were raising seedlings so she too began to breed irises. The chickens got into her first seedling bed and scratched out the labels which was particularly unfortunate as it was from this batch of seedlings that San Gabriel came. But Mrs. Dean is sure that Crimson King was one of the parents and *mesopotamica* must have been the other. Lady Lou, J. J. Dean, and Margery were among the pretty seedlings from her garden but her masterpiece, San Gabriel, overshadows them all and most others as well. It was introduced in 1921 and thirteen years later is still unsurpassed in its class.

Before Louisiana irises were so well known Mrs. Dean procured stocks from New Orleans and in crossing *hexagona* types with *fulva* she produced pinks, mahogany reds, and many shades of brown. She crossed the spurias and brought out Golden Nugget and other outstanding seedlings yet to be introduced.

It is more than eight years since Mr. Milliken bought the Dean Iris Garden, and four years since Mr. Dean passed away. Recently the home in Moneta where for thirty-seven years Mrs. Dean had lived and grown irises was sold. She now lives, without a scrap of a garden, in Los Angeles where she is near her sister.

I have often thought with what ecstasy Mrs. Dean must have looked on that first bloom of San Gabriel but she writes me that

“The greatest thrill I have had from San Gabriel came about a year ago when we accepted an invitation to go to Pasadena to listen to an oratorio. What was my surprise to see the beautiful church decorated with flowering almond and San Gabriel irises. Somehow I felt they belonged to the service—they stood up so tall and beautiful in a row as though they were a part of the singers in the bank of almond blossoms.” And in response to what I had written to her regarding San Gabriel she writes: I am glad to think it may continue to give pleasure to those who appreciate that kind of beauty—just sheer loveliness.

PROF. E. O. ESSIG is notable in his profession. In *Who's Who* I learn he was born in Indiana and that he received both Bachelor and Master degrees from Pomona College in California. There is also an account of his steady and rapid rise to his present position which is Professor of Entomology and Entomologist in the Experiment Station, College of Agriculture, University of California—a position he has held for a number of years.

He is a member of Sigma Xi, Phi Sigma, Alpha Gamma Rho, Alpha Zeta, also of numerous societies and associations pertaining to entomology and has written three books: “Injurious and Beneficial Insects of California” (two editions), published by the State Department of Agriculture; “Insects of Western North America,” published by Macmillan Company; and “A History of Entomology,” published by Macmillan Company. These books are used by farmers and as text books for Colleges and Universities.

Prof. Essig is President of the American Fuchsia Society and Regional Vice President of the A. I. S.

In 1923 he began hybridizing irises with more than three hundred named varieties in his collection. Out of the crosses made those first years came Pacific, California Blue, Pink Lass, Rosutra, Stipples, Uncle Remus, Firefall, Western Skies, Sundew, Rose Mitchell, and Modoc—a remarkable record. As he had no commercial aims none were introduced until Mr. Milliken got permission to catalogue eight of them in 1929, the others were brought out the following year. In spite of the flood of irises that have been introduced since then many of these are still outstanding in their classes. As Prof. Essig advanced in his profession so he has progressed in iris breeding and we now have

Tenaya, and Ukiah, Sierra Blue and Pale Moonlight, New Albion and Easter Morn besides others as fine.

The charming, little Essig Garden is laid out on the steep hillside above Berkeley overlooking the beautiful Bay. In the garden are irregular terraces, winding paths, a small out-door living-room perched half way, beguiling steps and at the bottom a tiny pool and a bit of lawn. Ukiah grew tall and rich on a high shelf near the northern boundary, Western Skies on a narrow terrace to the south-west where one could look from it to the western skies. Near by was a good unintroducted "pink." Mourning Cloak occupied a pocket close to the house and the stately Sierra Blue had its place in the center of the garden. Plants of all kinds placed close together thrive. Injurious insects, no doubt, make haste to leave when they learn who is the master here.

The iris seedlings are grown on a vacant lot across the street. They are hardly allowed to finish blooming before they are dug and the ground refitted for the next crop. There is no end to this game and from good Prof. Essig goes on to better.

LENA M. LOTHROP was born of a garden-loving Congregational minister and a mother who wrote. That is her pedigree. She is tall and has two branches—both daughters. Her standards and her falls have been many and her styles variable.

She was born with an iris complex, always being partial to iris designs even the stilted *fleur de lis*. It was not until the daughters were out of the home that there was an opportunity for her to have a garden. I dislike to remember how ignorant she was. Her father had bought seed of Burpee, so she sent for that catalogue. She ordered six of the eight irises listed. She determined to have a complete collection—all the varieties there were! In a package of tulip bulbs she had ordered was a slip which read "Subscribe for the Flower Grower." Now this was her first knowledge of a periodical entirely devoted to flowers, so she took the advice on the slip and subscribed.

Not long after there appeared in the Flower Grower a series of three charmingly written articles on irises and signed by S. S. Berry, Redlands. Mrs. Lothrop asked every one, "Do you know anyone in Redlands by the name of Berry?" No one did. It was important, as he had described irises such as she had never dreamed and they were illustrated. She began to have doubts of being able to have a complete collection.

The fame of the Redlands flower show had spread abroad and Mrs. Lothrop determined to attend tho she did not know how she would get there, as she did not in those days drive and her husband used the car daily. Then fate threw her down and picked her up. With her physician she was driving to the Loma Linda Hospital early one morning (it was April the 15th) for an operation. As they came on the grounds of the sanitarium and hospital she noticed handbills tacked to the trees advertising the Redlands Flower Show. "There," she thought, "I am missing that again." Strange as it may seem there had been a misunderstanding and the surgeon had gone to Los Angeles so she was advised to remain at the sanitarium until the next day and then go to the hospital. At luncheon in the dining-room it was announced that cars would be waiting outside to take anyone who wished to go to the Redlands Flower Show! Of course she went. There were in the car three men and one woman beside. She told the woman all about the article in the Flower Grower and S. S. Berry and how much she wanted to meet him.

Such irises as she saw that day! I doubt if they have ever seemed quite so gorgeous since. On one side of the tent were ever so many irises exhibited by a Meda Hinckley, and on the other side in the open class were just as many exhibited by one C. G. White. But there was not a sign of S. S. Berry until in the back of the room the woman companion spied a man setting up a commercial exhibit of irises. "Perhaps that is Mr. Berry, ask him," she urged. So they approached and asked and he smiled and cupped his hand behind his ear and she faltered, "Did you write some articles for the Flower Grower?" "I have done such things," he answered.

Later on in the hospital she lay plotting and planning how she could get to the Berry garden, when one of her visitors, who drove a little old "Model T Coop," promised that as soon as she was able to go she would take her—and she did, more than once. When Mrs. Lothrop learned that the Berrys came from Maine she was able to prevail on her husband to go with her, as he, too, came from Maine, and these Maine-ites—they are sort of set apart, you know, but she did not care if she was not of the elect if only she could get to the iris garden!

All the rest has been comparatively easy for she became a member of the A. I. S. She had the eastern officers quite alarmed when she received four H. M.'s in one year, but that was just a stroke of "beginner's luck."

MR. C. S. MILLIKEN. I have *known* Mr. Milliken for years. When we have met we have talked on the most interesting topics in the world—irises. What did it matter where we had lived or what we had done, time was flying and we had to consider what might be the effect of Camelliard pollen on Purissima. Would it produce a pure yellow? Then there were those other crosses and that new iris we had seen or heard about. There was also possibly a bit of gossip about iris-folk and their reaction to certain irises—all very important—so much so that when I had to write some of these "biographies" of our illustrious breeders I found I did not know a thing about C. S. Milliken except that in days gone by he had left "Boston Tech" with a diploma.

Abashed by my ignorance I took Donald aside and questioned him privately but when I had finished he said "You would better ask father, I may not be right."

Meeting his father in Mr. White's garden I remarked that I was writing the history of his life (!) and needed corroboration of data received from Donald but he did not register the least interest. I began to quiz: "You taught in Michigan after graduating from Boston Tech?" Meekly came the response "Yes." "Then you taught at Rippon College in Wisconsin?" Another meek "Yes." "You then came to Pasadena and occupied the chair of biology at Caltech?" He came to life. "It was not Caltech then it was Throop Institute of Technology." (He spelled "Throop" for me) "But you were there two years?" I persisted. "Yes, it is true," he said resignedly—he was getting restless. Mr. White's seedlings were much more interesting to him than my story of his life! He was moving away—I called after him, "You were associated with the University of California in its Citrus Experiment Station at Riverside?" Another "Yes" was thrown to me over his shoulder and quickly and louder I called: "And since then?" Beyond several rows of seedlings came the answer. "Since then I have been with the California Fruit Growers Exchange," and he was gone.

In 1925 he bought from Mrs. Dean her stock of irises and thus

began the Southern California Iris Gardens. Very shortly thereafter he acquired the habit of carrying pollen which has grown on him until one might say that he is a *confirmed* iris breeder. Red Flare came into being with its bright unusual color, and a fine dark blue, Royal Salute, is being introduced this year. It is a giant Gaudichau, being a cross of that lady on California Blue.

Mr. Milliken has made such a wide variety of matings that one can find in his seedling beds an array of every known and unknown shade of iris color with form and stems in all their varied ramifications. He was for keeping them all for how otherwise could he know what were their parental possibilities! There are many fine seedlings among them, many which you and I will want to grow. Mr. Milliken is conservative and we can be sure that when a Milliken iris is introduced it has been grown in his garden several years and has proven to be good and outstanding.

He is deeply in love with irises and more deeply in love with creating them. At any time he can pull out of his pocket the little book which contains the records of his crosses and while away the tedium of a waiting hour in seeing visions of beautiful irises to come.

Two years ago the son, Donald, took over the iris business. Donald and I were planning for the ratings of 1934. "Father do any rating?" he queried with raised eyebrows, "But he promised!" I protested. "Then you will have to take away his tweezers," flatly declared the young man.

SYDNEY B. MITCHELL. Sydney B. Mitchell was born in Montreal, Canada, and received both B. A. and M. A. degrees from the McGill University. He studied librarianship in 1903-04 at the New York Library School in Albany. In 1908 he became associated with the Stanford Library, and in 1911 he went to the University of California, where he has since remained except for the year he was loaned to the University of Michigan and the year that Professor and Mrs. Mitchell spent abroad.

Mr. Mitchell is now Professor of Librarianship and Director of the School of Librarianship, University of California. His name appears in *Who's Who* in America.

Prof. Mitchell became interested in iris growing when a student at McGill and brought to California in 1908 his large collection of the best varieties of that date, imported largely

from England. Becoming acquainted with Mr. Mohr, he took a great interest in the latter's iris breeding and introduced his earlier seedlings.

After Mr. Mohr's sudden death Prof. Mitchell took over the Mohr breeding records and seedlings and carried on the experiments planned jointly by Mr. Mohr and himself. We all know that to this day Prof. Mitchell is, by combining the names (Mohr-Mitchell), continually giving credit for the early work in breeding done by Mr. Mohr.

Just now Prof. Mitchell is succeeding in giving us large yellows, both with and without the use of W. R. Dykes, and as a by-product he is producing some beautiful blends.

In 1927 the Dykes Medal was awarded him for the first of his series of giant plicatas, San Francisco. Many of the finest irises in California gardens are the result of his work. Among them are Aurifero, Purissima, San Francisco, San Diego, Los Angeles, Rubeo, Mirasol, Natividad, Alta California, California Gold and Sunol. How bare would be our gardens without them.

All of us who read garden literature have been charmed and benefited by the writings of Sydney Mitchell. "Gardening in California," published in 1923, is still kept close at hand for ready reference. "Adventure in Flower Gardening" was published five years later, and the fascinating story of his own garden, "From a Sunset Garden," was new in 1933. Recently there have appeared in a California magazine a series of articles on the trials of a Sunset Gardener, and also interestingly written individual articles on different garden topics from his facile pen. They are instructive and delightful reading.

WM. MOHR. Mr. William Mohr began breeding irises about 1913. In 1923 he and his wife were killed in an automobile accident. Although the standards by which we gauge irises has changed greatly in the last ten years we are still growing many of his seedlings. In almost every California garden one will find Santa Barbara, Conquistador, Frieda Mohr and the very blue Claridad. His pogo-cyclus Wm. Mohr, which was named for him after his death, has not been excelled by any other producer.

The following sketch of Mr. Mohr has been taken from the

article written by Prof. Sidney B. Mitchell and published in A. I. S. Bulletin, No. 9, October, 1923:

“William Mohr was born on the ranch on which he spent his whole life. His father had come from Schleswig-Holstein in 1852 and had bought the land from the old Spanish Castro family, whose huge rancho antedated the Americans. At the time of his death he owned 400 acres around Mount Eden, a little hamlet between the hills and San Francisco Bay.

“Two or three acres around the big ranch house were his garden, not a show place nor one developed along landscape lines, but a glorious garden for the plant lover and a fine experimental ground for hybridizing. Mr. Mohr was 52 at the time of his death and for 40 years he had been growing flowers, so that a visit to his ranch at almost any time of year was interesting.

“He had always been fond of raising things from seed . . . long before he took up irises he had done much crossing of carnations and Lady Washington pelargoniums.

“His work with irises began when he had only a few of the then quite ordinary bearded varieties, but he soon imported Regelias and Oncocyclus and their hybrids and began work on them and to improve his strictly bearded irises he got *mesopotamica* and *cypriana* and other Asiatic species. For years he worked away on this flower by himself and during that time got some quite remarkable results, but with the added stimulus of letters from Miss Sturtevant, Dr. Berry and others, and the visits which I, from my close proximity, was able to pay him, he became more absorbed in this particular flower and at the time of his death was raising thousands of seedlings in a wider range than any other hybridizer whose work I know.

“Though without formal scientific training, by reading and experiment he came to have a real scientific attitude toward his breeding.

“He was a man of singularly modest character, always unready to praise his own productions, always unwilling to judge adversely those of other breeders.

“His feeling that even the best of today's varieties were to be superseded by finer ones made him slow to name any of his own seedlings. If even the finest were not good parents he soon lost interest in them. It was to the future of his favorite flower that he always looked.”

MR. CARL SALBACH is a native son. He was born near Stockton and there received his education and for eight years served as deputy county clerk. Since then he has spent most of his time as a salesman and as a hybridizer.

He first sold typewriters and was so successful that in less than a year he was in charge of the Los Angeles office. After several years he was promoted to the position of manager of the San Francisco office, where he continued until the company was merged with another. He then had charge of the Royal Typewriter Company's office in Oakland for seven years—when his garden claimed him.

For fifteen years he has been growing dahlias, gladiolus and irises. He produced a number of dahlias which are still being offered, but he confined most of his effort to breeding gladioli. Probably his best known gladiolus is Betty Nuthall, which is being grown by the million for the cut-flower trade. His new yellow gladiolus, Golden Goddess, has been granted a plant patent. It is said to out-class anything in its color.

During the last two or three years Mr. Salbach has done considerable work with irises and has produced some fine ones. Tioga is one of the best blue-purples and Gold Top is a very floriferous blended variegata which is proving to be an interesting parent.

Mr. Salbach became associated with Prof. Mitchell in marketing the originations of Mr. Mohr and the productions of Prof. Mitchell himself. In this way some of the best varieties in our gardens have gone through his hands.

Mr. Salbach has been generous in donating iris roots to be used as prizes at iris shows. These prizes have often stimulated the recipient to greater iris interest.

The gardens of Mr. Salbach and Prof. Mitchell lie side by side on the northern slopes of the hills above Berkeley and, with the garden of Prof. Essig near by, are a mecca to all iris lovers.

MR. C. W. WHITE. Mr. White comes from the state of Ohio. He attended Harvard, spent eleven years raising potatoes in Florida and another eleven years in Hawaii growing pineapples before coming to California. In 1915 he bought a lovely home on the hills above Redlands, where he has since grown oranges and his garden.

One cannot come into Redlands without seeing every where evidences of his thoughtful desire to help and to beautify his home city. Thousands of rose bushes and thousands of iris roots and other plants have gone into its home gardens by his gifts to the school children and Mr. and Mrs. White have given a beautiful prosellis for the little open-air theater which is used at least once a week for community concerts.

Mr. White became interested in growing irises through the garden of Dr. Berry. At first it was necessary to visit the Berry garden often to get the battery of his enthusiasm recharged, then it became self-charging and last spring it was going so strong that, when it came time to exchange garden for yacht, he was loth to leave.

The iris and rose garden, embedded in a fragrant orange grove, slopes to the north. Below lies the beautiful valley accented by giant eucalypti and margined on the horizon by mountains. It was in this setting that Lady Paramount came into being. Above the wide garden gate one reads:

Enter here knowing
That this is a nursery
Of loved plants, honored work,
Simple thoughts, and the
Hopes that dreams are made of.

The true iris ambition of the master of Whitehill is to produce for all gardens and garden-lovers dependable, acclimated irises of oncocyclus form and loveliness. He realizes that not every one is able to do this experimental work and that unless it is done soon the oncocyclus irises are doomed. He grows the species in large numbers, having at the present time more than seven hundred clumps of oncocyclus and regelia species and named hybrids. To read their names, sixty or more, is like reading a compilation from the check list. *Lortetii*, *Hauronensis*, *Sofarana*, *Hermoine*, *urmiensis*, *paradoxa*, *Barnumae*, *Sylphide*, *Polyhymnia*, *Masia*, *Persephone* and *Ewbankiana* can be read on some of the labels. From such parents as these over a thousand seedlings are growing exceedingly well on their own specially prepared terrace below the main garden.

Mr. White knows that the introduction of oncocyclus blood into the pogon irises will bring new forms, new colors and added

charm to our garden irises. This has been demonstrated at Whitehill.

He does not take seriously his work among the pogons. That has been but a pastime when there were no oncocyclus irises to breed. But with the bearded irises he seems to have been inspired as witness Lady Paramount, Brown Betty, Sweet Alibi, Fair Enough, Another Day, Somebody and scores of others.

Every garden lover has reason to be thankful that Mr. White has the courage of his convictions and that he is pushing on!

DR. F. F. WILLIAMS. Dr. F. F. Williams came from the most northern part of New York State, where both people and irises need to be hardy. He received his degree of B. S. from St. Lawrence University, in his home town, and his M. D. from a New York City Medical College. He married the charming girl who has proven herself to be a sympathetic "iris wife" and the spice of our Group meetings, and accepted a place on the staff of the State Hospital at Patton, California. In ten years he has advanced to the position of Clinical Director in this institution which cares for nearly four thousand patients.

The Doctor has a natural aptitude for gardening and the steps of his iris education happened in this way: 1. An attendant in the hospital gave him a few bulbs of both white and blue Spanish iris. He did not know what Spanish iris looked like, but he grew them, and 2. carried blooms to the Redlands Show, where they were awarded a blue ribbon and a prize of an iris root donated by Mr. Salbach. 3. He visited the Berry garden, saw Cacique in bloom and was completely and permanently captured by the charms of the apogons. Such surrender costs money and his pocketbook was thinner by five dollars. 4. In Mr. Milliken's garden fortune favored him. The purchase of a beautiful white hexagona-like flower was denied him so he bought the blue form which when it bloomed proved to be the white iris he craved! 5. He joined the A. I. S., bought iris books and the iris numbers of Addisonia, corresponded with Dr. Small, who sent him seed and later roots, when collecting in Louisiana.

By this time the Doctor knew something about irises. He makes a particular study of the requirements of every iris that comes into his garden, as he does of the patients in his clinics, and brings about the conditions needed. For those

irises which grew so happily in the marshes of Louisiana and the wet savannahs of Florida little swamps are created, and beds of muck for the *laevigatas*. He is repaid by quantities of bloom and an amazing increase of roots.

One apogon pod usually holds a lot of seed and the doctor has a small garden so he has produced seed sparingly, but interestingly. One of his first crosses was *versicolor* on *pseudacorus*. *Pseudacorus* has the reputation of producing only *pseudacorus* and it lived up to its reputation but it evidently was a "take" as the seedlings were dwarf although yellow. *Versicolor* on *sibirica* Emperor gave larger flowers of *sibirica* form, and *fulva* on the white *hexagona* produced a wide variety of lovely irises, one of these, *Laurentia*, named in honor of his alma mater, has been introduced and one of the Emperor seedlings has been named *Lillabell* for his mother. Five outstanding new apogon seedlings bloomed in his garden this year, the most exciting being a lovely primrose yellow.

The Doctor, who is loved by everyone who knows him, is happiest when he is sharing his garden and plants with others.

TO READ OR NOT TO READ

■ The Story of Gardening. By Richardson Wright. Dodd, Mead & Co. \$3.00. Not often is so extensive a compilation of facts presented as "easy reading." The thirteen pages of Bibliography lead us on to even further study and the almost thirty pages of Index prove its value as a reference. It is, however, the approach to the subject that makes the volume of unique value. Perhaps with his tongue in his cheek, Mr. Wright begins with gardening *by* women when the nomads first became settlers and he ends with gardening for (and by) women as expressed in the Garden Club movement of today. And in between we travel the "Four Great Gardening Highways," the West Asian, the Hellenic, the Hindu, and the Chinese to each of which our modern garden owes a something.

The art of gardening develops with civilization and reflects its religions, its customs and its other arts. "Gardens and garden methods indicate eras and marks the evolutions of peoples." That we like to associate what we have with the past, with distant climes, and venturesome personalities makes the fascination of the book. Throughout the ages there have been names of students, designers, and adventurers in the gardening world and names of others who loved plants and encouraged these activities just as there have been warriors, prophets, and statesmen. How rarely, however, are we given an opportunity to read of their doings? Mr. Wright clearly considers gardening an essential to living and he brings us into an appreciation of how peoples in past epochs agreed with him.

Breadth and simplicity of treatment; interest; most fittingly dedicated to Ernest Henry Wilson.

My Garden, An Intimate Magazine for Garden Lovers. Edited by Theo. A. Stephens, 34 Southampton St. Strand, London, W. C. 2, England. *Monthly*. \$3.00 (12 shillings).

Beginning in January, 1934, with contributions from Sir Wm. Lawrence, Sir Arthur Hort (our iris friend), Beverley Nichols, and many others this 150-page booklet of a magazine continues delightful. It is rather like that scrap-book we always intend to make with its serious article on Irises on a Chalk Soil, its plan for a terrace, its bit of poetry, or humorous essay. There are bits of plant lore such as we find in Horticulture, plant gossip such as The Gardeners Chronicle still offers us, lovely pictures, and hints on methods. Altogether, even in these days of deleted subscriptions, it must find its niche among the garden books.

OUR BULLETINS

■ **Breeding.** Six Bulletins. Nos. 16, 19, 22, 33, 43 and 52. \$3.00. An article by C. H. Graham in *The Flower Grower* has brought many an inquiry for No. 16, A Report on the Sterility of Irises, published by Dr. A. B. Stout of The New York Botanical Garden and in, part, the fruit of scholarships for research offered by our Society. At present the interest of breeders seems to be centered on chromosomes (there are to be articles in both July and October, 1934) but throughout our history we have published much on the scientific side of breeding irises. Mr. Bliss (No. 2) and Miss Sturtevant (No. 3) gave records of fertility. Breeders are always interested in parentage of varieties and we published the Alphabetical Iris Check List in 1929 (\$3.50) and list, each January newly registered or introduced varieties. Many a breeder also writes of his successes and of his theories and their failure, while the more scientific branch out into the general theories of genetics and their possible application to irises.

In January, 1928, we first listed "Science Series" and have now reached number 14. Herein you will find contributions on genetics, soils and fertilizers, entomology, etc., of unique value. This present set, however, includes the available numbers that offer notes and articles of especial interest to the breeder.

Checks payable to A. I. S. Send to R. S. Sturtevant, Groton, Mass.

TID-BITS

■ **Likes and Dislikes of the General Public.**—From the viewpoint of the professional iris grower.—If I were to pick an iris that would be ideal from a sales standpoint, the chances are that I would find myself a long way from my own choice as the finest iris. The public will choose almost any iris that has both size and color, regardless of other qualities: form, finish, texture, and other characteristics, being of minor importance when compared to these two apparently "vital" factors.

Take, for instance, the popular Magnifica. I have seen many persons who are quite certain that there is no more beautiful specimen existing. As a mass in the distance, I cannot help but be impressed, but as an individual flower, I believe that Magnifica, with its flappy "elephant ears," leaves much to be desired.

Proof of the importance of size is the saying "small iris, small

price.” Just imagine the introduction of a dwarf iris at \$50 a rhizome—and I think you will see the point.

As to color, *Pluie 'd Or* is, I believe, an excellent example. This iris ranked first in the A. I. S. list of the fifty most popular iris, although many others have better size and habit.

Yellow is probably the best selling color in an iris today, although a true warm salmon pink might have even more sales value. The reception that might be accorded a flame or scarlet red is a thought to be toyed with. Such an iris might be the best money-maker of the lot. Breeders, however, should take warning, for it is my understanding that Dr. Harry Everett owns a well oiled shot-gun that is ready for use on the first man guilty of producing a scarlet iris. And don't bank on me to keep your secret, either, for I have a sneaking suspicion that I might forward the information direct to the Doctor in Nebraska.

In general, however, one must admit that the public is not well up on iris—most are unfamiliar with any but the common *Kocchi*, *Pallida*, *Albicans*, etc. Classic as an example is the tale about the new yellow “California Gold.” A bloom, given by the originator to a true iris enthusiast, was displayed alone in a vase in the latter's office. His first customer of the day, on seeing the bloom, exclaimed, “It's not true! There isn't any such iris!” The next customer remarked, “Pretty yellow iris. I have a lot like it in my own garden.”

Although slightly off the subject of likes and dislikes of the general public, no “professional” iris discussion would be complete without a mention of the common belief that iris “revert” to the common purple or white varieties. The explanations, of course, are simple—usually coming from the two facts that the commoner iris are very early bloomers and most rapid multipliers. *Kochii*, for instance, may bloom from a nubbin left in the ground during transplanting years before. Perhaps, in the garden next door, *Albicans* may bloom ahead of all the other iris purchased the previous year—and the “reverting” story can pass through a great many minds before the blooming of the new varieties will correct the impression.

In conclusion, please note that this article deals only with the average rather than the more discerning gardener, and certainly not with the reactions of the iris enthusiast.

CARL SALBACH, *California*.

■ FROM A MARYLAND GARDEN.

No matter how much we admire the Bearded Irises, we must admit that they are a bit heavy when planted in masses and need smaller flowers to relieve them of their heaviness. No type plant is more useful for this purpose than the easy growing rock plants; they are feathery in appearance, their colors blend well with the Irises and they bloom at just the right time. Used as edging plants they give the garden charm and should be grown a great deal more than they are. The beauty of arabis, *Alyssum saxatile* and aubrietia is enhanced by Iris Nymph, *Florentina* and a purple intermediate. A little later come many more of these rock plants that are so easy to grow and to place. *Saponaria ocymoides*, *Gypsophila repens*, all the pinks and low growing veronicas, *Nepeta mussini*, creeping *hypericums*, *Cerastium tomentosum* and iberis. All these thrive under the same conditions as do the Irises. For taller plants there are Heuchera Rosamond, aquilegia and hesperis. I dislike the hesperis but a plant or two are sometimes useful in an Iris garden. In England Lupines, which grow so marvelously there, are used, but they are large and stiff and make the planting heavier than ever. *Baptisia australis* is good.

Those who are seeing artistic effect should not plant too many Irises together and I do not think they should be allowed to grow into very large clumps as they sometimes do. I prefer being just a plain fan and planting mine in the cutting garden with just a few favorites (which are always changing) around the house.

Last summer I saw a number of new Irises and some which were only new to me, a few of them intrigued me very much. I do not like a variegata, but I did succumb to Crown Prince, which is yellow and brownish red. Edgewood is a very large pink bicolor and it has height. Blue Banner is a beauty. I cannot understand why the medal was awarded to San Francisco and not to Los Angeles, which is so much more lovely. Pale Moonlight, an exquisite pale blue, Rameses, a free blooming variety with pink and yellow tones, Sitka, a fine white and Gloriele, which I have kept for the last. I almost believe it is the most beautiful of all Irises. It is a large, well-formed white, tall enough to carry well its big blooms. It glistens in the sun as though covered with frost. I have read descriptions of it, giving its color a very pale blue, but the one I saw was white. May the gods of gardens soon lower it within reach of my eager hands!

ELLEN GEORGE LOVE.

■ IRIS IN KLAMATH FALLS, OREGON.

Klamath County is a new dot on the Iris map of members of the American Iris Society. Although there are many splendid Iris gardens in Oregon, I believe eastern Oregon is not represented. It seems to me that we have quite the ideal Iris land. We lack the rainfall of the western parts, being in semi-arid country. Our elevation, 4,100 feet, gives us decided seasons—often zero weather, late frosts, but very dry, and often hot summers. The soil is volcanic ash, mostly all on slopes, giving very good drainage. Why have we not a perfect spot in which to raise Iris? Only the very early flowering varieties are often frozen by our usual May frosts after a storm.

In reply to some questions you ask in the January BULLETIN: About the only trouble we have is root-rot and, as I said, early May frosts, which do not harm the later varieties; in fact, only the very early are killed.

I am a comparatively new grower of better varieties. Only the last two years have I bought good ones. At first I felt I wanted many varieties, but I feel more and more that I wish only good ones. I want the effect in the garden and the cut flowers. My garden is on a very sloping piece of land and I have planted the parking, 100 feet depth of lot, in iris. It is too steep and rocky for grass. When the plants increase, I shall try some special color arrangement. At present, just anything and everything is there, with no plan. In the garden proper I have tried to blend browns and pinks, with here and there yellow—in another part blues and purples.

I think iris quite the loveliest flower I know and grow it for that reason. There is the most wonderful thrill in just looking at a vase with certain color combinations. I believe I enjoy the cut flowers quite the most, although the clump in the garden, with certain light shades, is as thrilling. A Princess Beatrice under a pink hawthorn tree is marvelous, with pink and blue columbine close by. I believe I enjoy the old as well as the new until the new prove more enjoyable. The old yellow *Flavescens* could never be discarded. I put it every place.

Then, too, I must admit that I enjoy actual gardening, digging, transplanting, watching the increase, and then hoping for something different from my seedlings. At present, January, I am stepping on all the poor heaved up rhizomes washed out by rains and frosts.

With us, the Darwin tulips, which are planted in the shade, bloom at the same time as iris, and spirea, too, is in bloom, making gorgeous, big, mixed bouquets possible.

Of course, I am anxious to see our "god-child" Klamath blossom here. I have planted it only this last summer. My better irises are so new I am unable to tell which I like best, and as yet have not been to a real iris show or to any growers' gardens in blooming time. Those that have been growing here for some years, are the old Prospero, Ambassadeur, Williamson and others of that generation. A friend has Lady Foster, which is a beautiful clump; another has beautiful Mother of Pearl.

We have had two iris shows but are too amateurish to properly display what we grow, and very few people have large quantities which they can show. I have about one hundred and fifty varieties, which are classed by Mr. Schreiner as Dupes, or Class I, and in '36 hope to be able to say more about them.

NAN M. KRAUSE.

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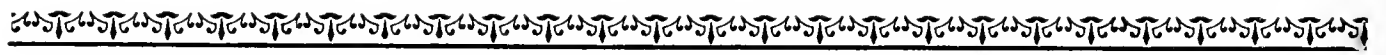
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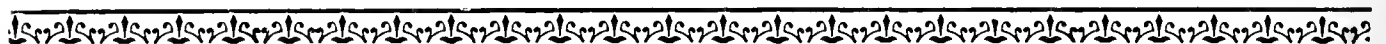


The American Iris Society



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Make your check or money order payable to the American Iris Society and send to Mr. John Ferguson, Monumental Printing Company, 1918 Harford Ave., Baltimore, Md. Please follow this instruction. It will help us all in the record keeping.



BULLETIN
OF THE
AMERICAN IRIS SOCIETY

OCTOBER, 1934

DESCRIPTIONS—PART VI

NO. 53

Editor, R. S. STURTEVANT

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THE AMERICAN IRIS SOCIETY

COMMENT AND REMARK

■ The October BULLETIN has now for some years been devoted largely to Ratings, the preliminary reports of the Committee on Awards, and your Editor is not quite sure why this issue is without a report. It may be a mere delay (when a Society is wholly dependent upon the good will of its members for a heavy task, unforeseen personal complications frequently arise) or it may be due to a general dissatisfaction with the whole principle of ratings and awards.

By July 15th (the closing date for reports from the accredited judges) only 22 reports had been received, 12 of them from the New England judges. What more the special letter brought in I do not know but I know all too well my own reactions as a judge. Perhaps they are common to many judges. Perhaps they indicate the reasons behind a general dissatisfaction. At any rate here they are.

I have been a judge since judges were first invented to develop standards of excellence in judging Irises on Exhibit. (In 1920-25 garden value was easily judged by averaging ratings as all varieties were known to many members.)

Judging is hard. It takes time, great attention to detail, impartiality, and one must acquire a case-hardened attitude towards both the flowers *and their friends*. It is not pleasant to rate your host's pet seedling at 75 or even 85. It takes much of the joy out of an iris season when all your time must be given to rating and if this rating is done (as it must) in public one is always conscious of the bystander, whether he is the originator, the seller, or merely a "wanting to know how and why" observer.

With all these unavoidable drawbacks every means should be taken to make judging easy for the judge. The definition of qualities valued on the score card should be simple and reasonably permanent. (It is impossible to adjust oneself to new methods annually.) The judge should be advised what varieties are to be rated in a specific list and, by some hook or crook, this list should not be of excessive length. (Rating even 100 varieties is no sine-cure for odd moments during a short season.) The method of recording the rating should be as compact and short as possible as

the experienced judge achieves his total rating almost as a unit without conscious checking of each characteristic pro and con. He sees at first glance the crowded stalk and balances it against the brilliance of color or beauty of form. It is not a matter of arithmetic; it is a balance of attractions. Clara Noyes, for example, has few high qualities but until superseded we want it for its unusual coloring, and that effect in the garden which few other current varieties give.

To me, these three requirements; an accepted, familiar score card, a specific list of varieties to be considered, and the shortest method of recording my ratings, will make for pleasant and, hence, better judging.

To what extent have my requirements been fulfilled these last few years? The Score Card has been changed fundamentally and even in minor definitions twice. In 1931 I was requested to rate *all* varieties seen; in 1932-1934 those of the present and two preceding years (if I could remember dates of introduction). Each year I must fill out a detailed score for each variety. This involved a good twenty words or figures as a minimum. And *furthermore* I must re-rate each year the varieties of previous years in the same complex manner but on a new loose-leaf form and, at least once, by a new basis of judging.

It does not seem strange that 75 per cent of the accredited judges should fail to report in sufficient detail to provide an adequate average rating even if we make no mention of the storm of unjustified criticism directed at the judges and the Committee on Awards.

The question of ratings and of awards was adequately handled until 1930 by symposia and a very few awards. As the number of introductions increased trouble began. To reduce the number of novelties is impossible. To evaluate them fairly in comparison with other varieties has proved equally impossible. And yet—the average member needs guidance.

I wonder what would happen if we all went white next year, then yellow, and so on thus reducing the number of varieties to be considered and permitting careful comparisons of old and new varieties. In five years we might be back to the whites again, ready for a new lot of “purest” or “biggest” or “finest” whites

THE EDITOR.

"THE QUEST OF THE GOLDEN FLEECE"

HARRY H. EVERETT, M. D.

■ From out of the west came word of a golden flood of yellow iris, just as in olden times Jason sought the golden fleece beyond the western horizon. I, lured by rumor and glamorous promise, sought the goal of all iris-lovers, the perfect yellow iris. How near we have reached our desire on the sun-kissed hillsides of California, I will tell you.

Because of the early spring our party reached San Bernardino two weeks before the normal season of bloom, a little late for the earlier iris. Our party consisted of Mrs. Everett, Robert Schreiner and myself; we were later joined by Jesse Nicholls.

Almost at daybreak Mr. White, the proud originator of Lady Paramount, met us at the station at San Bernardino. From there we drove, warmed by the early sun through flower-bordered streets to the crest of a hill high above Riverside where Whitehall, our objective, lay.

It was difficult to think of iris where palm and pine and varnished oak hung with vine and framed in varied colors met one's eyes in the foreground, while in the distance the mountain ranges all mauve and lavender rose above the soft gray morning haze.

Mr. White's beautiful house rides a ridge high above Redlands, with its gardens and orange grove sloping sharply to the west and north. From our quarters in the little Spanish "Casa," the view was over the golden fruited orange trees, through pepper, eucalyptus and palm to the mountain beyond, while from the rose-hedged terrace of the house the same range was developed and framed by deodars in the foreground, with eucalyptus, pine and palm in the middle distance. Always, whether morning, noon or night, one turned from the glowing colors of the garden to the soft outlines of the distant hills.

From the terrace a flower bordered path led through rose arbors, the most beautiful roses that I have ever seen—roses of every type, climbers and hybrid teas, all a mass of bloom. The roses held our interest, and it was hard to believe that any other flower could be worthwhile.

The path led on past the tennis court, and then came the iris—a golden flood of seedlings, row after row beneath the latticed roof. Incredible as it sounds, Mr. White grows his iris beneath rather widely spaced laths. The heat of Redlands is intense in summer, and after our drouth and high temperatures in Nebraska I can appreciate the need for the protection of established plants, as well as the new seedlings.

Last year we had a minor drouth and an open winter, perhaps that explains why the Californians did so well this year in Nebraska.

The thing that impressed me the most at Mr. White's was the preponderance of yellow seedlings from each of several seed pods. Whites, blues and blends cropped out occasionally in the seedling rows, but the majority of blooms were some shade of yellow.

Lady Paramount was at the end of the season, a tall well branched iris, beautifully flowered, a little disappointing in this, that it was lighter than I had pictured. Some of the blossoms were dulled a trifle with a brown overcast which was less however, than that occurring on Alta California. One might say, it was a soft muting of its brilliance. At Berkeley it showed its Dykes parentage in spotting faintly. Nevertheless it has height, size, form and grace to perfection, and should be welcomed in every garden. I believe from my experience with Dykes that it will be free from these minor defects in the middlewest where Dykes never spots. It is a really wonderful iris.

To choose between the yellows in the three days given me in this garden was impossible, even if our inspection stretched from dawn to dusk. One deep yellow, clear and free from reticulation or bronzing, was particularly good; about the height and size and shape of Sierra Blue, this was the deepest and purest yellow I have ever seen, not as graceful or frilled or with as broad falls as Lady Paramount.

The color range in the yellows was from pale cream to deep yellow, many were bronzed on the falls, quite pleasing. The characteristics of the plant and the flower varied in the various seedlings just as did the tones of color. One would have to live a year or so with these seedlings to properly evaluate them. I can say at least that among Mr. White's seedlings and those of Professor Mitchell's at Berkeley, are the long awaited yellows in

tall bearded iris. They equal in purity and depth of color that attained previously only among the intermediates.

Other interesting and worthwhile seedlings were:

An apricot salmon self of medium height, well branched, broad hafted, with rounded falls.

A huge soft pinkish blue lavender, indescribably soft and silvery, with clinging standards and flaring falls—a huge crinkled flower with golden haft.

Another, a peculiar cream, blended mauve pink with color like a magnolia blossom; very pleasing.

Brown Betty, lilac and tan blend similar to Churchmouse, but larger and taller.

Sweet Alibi, a cream yellow of splendid form and extraordinary substance. This plant blossomed for me this year in Nebraska, and needs no alibi!

Besides the seedlings, other iris were Easter Morn, Sierra Blue, Yosemite Falls, the matchless Shining Waters, and many others of the Californians in splendid form. To these might be added a large bronzy red purple seedling of Mr. Reibold's, with enormous flowers, wide and low branched, and particularly interesting; also Acropolis, fifty odd inches in height, an enormous clump, widely branched and covered with bloom.

Other gardens visited in the Redland-Pasadena district were those of Dr. Berry, Mrs. Lothrop, Miss Hinckley, Dr. Williams, Mr. Reibold and Mr. Milliken. The time spent in each of these was of necessity short, but each garden was full of charm and beauty.

Dr. Berry proved a charming host. Here in his garden the myriad other plants and flowers led one away from this iris. I know that he has every species of flower that will grow in California, and as Mr. Wister wrote me "he grows them four deep!" Dainty *Wattii* grew on 6 ft. stalks in his garden. It was hard to believe it an iris. We had just a moment in Mrs. Lothrop's garden with its many promising seedlings. Miss Hinckley's garden was a new one and the plants just moved, but I noticed that all her iris were well grown and were an evidence of her love of the beautiful.

At Reibold's, one found, in spite of an early spring flood which covered his plantings with silt, a marvelous profusion of bloom. Here for the first time I saw the best iris of the Eastern

and foreign hybridizers grown in good form. Alongside these the Californians prospered wonderfully. Mr. Reibold has some good yellows and whites, and in the darker iris and the blends some beautiful new seedlings.

The impression of some in the East is that most California iris are blue, but Mr. Reibold, Mr. Milliken, Professor Essig, Professor Mitchell, and Mr. Salbach, all have blends and darker iris coming on which have none of the bunching and stubbiness of many of the Dominion seedlings to which we are accustomed, and which we deprecate.

Dr. William's smaller garden is crowded with delight. His bearded iris are unnoticed amongst the Apogons. He grows the Southern species to perfection, and his many hybrids make one long to live in a climate which is favorable for their development. To one who has never seen the iris of Louisiana and their hybrids, their grace and beauty is unbelievable.

A happy combination of a commercial and hybridizer's garden was found at Mr. Milliken's. Here he grows the newer seedlings of Professor Essig, along with the older Californians. He has a fine collection of the Eastern iris. All seemed to be prospering equally well. Such iris as Baldwin, and Blue Velvet which are said not to do well at San Bernardino and Redlands, were healthy and blooming profusely. The soil at Mr. Milliken's and at Mr. Reibold's seemed mellower and richer than in the other gardens of the district, perhaps this will explain the varying behavior in the several regions.

Tenaya, Modoc, Pale Moonlight, Shining Waters, Pacific, Santa Barbara, Mauna Loa under the apple tree with a seven-foot stalk, Ukiah and San Gabriel were all fine iris and in fine form.

Inspection of the seedling rows revealed some excellent iris:

One, a glorious pure white of El Capitan form with broad standards and falls, was the best of those in bloom. I class it along with Polar King, Jacob Sass's huge white, and Professor Essig's exquisitely charming new white. These whites are all different and are the four best I have seen in any garden.

A second white, trailing this first mentioned but little, is of heavier substance and flaring. Outstanding.

A mauve blue of Santa Fe type was very pleasing.

A rich rosy red iris, a darkened and richer Dauntless, more like

Joycette in color, displayed only one fault that of rather prominent veining.

Two more seedlings were of moment; one a large flaring bloom with closed standards, was a soft coppery pink; and the other—a larger, lighter Aurifero with light golden haft on pure blue, a clear clean blend.

The Berkeley Region was as interesting and fruitful in surprises as the Southern California district.

Professor Mitchell's newer seedlings fell in a yellow flood adown the hill below his house to meet a yellow pool of his earlier yellow seedlings in Mr. Salbach's garden, which lies at a lower level. Here again it was impossible to pick out the best or the nearest best of the newer seedlings.

As Lady Paramount stood out among Mr. White's yellows, so did Happy Days excel among Professor Mitchell's.

Happy Days, as I saw it at Professor Mitchell's had none of the characteristics one would expect from Dykes parentage. It is a glorious plant with large graceful flowers, tall and well branched, of a slightly deeper yellow than Lady Paramount. These two seedlings, Happy Days and Lady Paramount, are easily the two best yellows which I have seen, far superior to any of the American or European introductions to date. Neither are deep yellows.

One can travel along his seedling rows and find iris after iris worthy of the highest praise. No where to my knowledge, except in the gardens of Mr. White and of Professor Mitchell, can *directed crosses* so productive of yellow be found.

Inasmuch as the Mitchell and the Salbach Gardens lie together, and as Mr. Salbach has the distribution of the Mitchell seedlings, I shall treat them together.

Taking the yellows, first in order, was Alta California, tall, stately and beautiful in mass. When it is seen from a distance one forgets that it is not a pure yellow but is faintly washed with bronze.

Sunol, not as tall as California, is of Ochracea type, but is larger and cleaner and better branched.

California Bear is a deep, clear yellow.

California Gold is brassy yellow, with large flowers.

Natividad, a creamy white, with a golden throat, was one of the best iris in any of the gardens.

Among the new Mitchell seedlings, one might mention a clear, medium yellow of very heavy substance, splendid form. Outstanding.

A sulphur yellow, large, round and broadly ruffled, also outstanding.

Three cream Eastern Morns, very fine, which range from light cream in the lightest to nearly sulphur yellow in the deepest.

A true porcelain blue, a small flower with red gold beard, delightful.

A soft peach yellow or apricot yellow, a large plant and flower, outstanding.

A large cream plicata, almost a yellow plicata. This plicata is a step toward yellow plicatas, but is far short of two large true yellow plicatas I saw in Mr. Han Sass's garden this spring—nevertheless it is a worthwhile iris.

The iris above noted are by no means all which are worthy of comment.

Leaving the yellows one comes to Neon, which is perhaps the most brilliant and intriguing of all the coast iris, a glowing "near" variegata. It is unfortunate that the variegatas in commerce are too dull to be the ultimate in their class.

Two "reds" were interesting. "Prof. S. B. Mitchell" is a deep ruby claret, of good size and quite attractive. Rubes which did not impress me at Mr. White's or Mr. Milliken's, was tall and well branched, rich red brown in color—outstanding at Mr. Salbach's.

Tenaya, an Essig seedling, a good companion for his Ukiah, both outstanding.

Dark Knight (Salbach) rich velvety auricula purple, nearly a self, with a medium gold beard, and falls of rich blackish mahogany purple. Dominion type of stem but far better spaced than the usual Dominion seedling, outstanding.

Brunhilde (Salbach) a self the coloring of Blackamoor, does not fade, is widely and freely branched.

Brunhilde's Sister (Salbach), similar to Brunhilde, more widely branched. I do not know which is the better iris.

Rosy Asia (Mitchell), as the name suggests is very pleasing.

Of the Eastern iris, Indian Chief, Blackamoor, Dauntless, Black Wings, Rameses, Clara Noyes, Desert Gold, Irma Pollack, King Karl, King Tut, Persia, Pink Satin were completely at home and giving a good account of themselves.

Two iris I had never seen and which are outstanding are Mr.

Wareham's "Legend," easily the peer of any iris I saw; Dr. Chobaut, a French introduction is to be classed along with Mr. Grinter's two blues, Jacob Sass's Blue Monarch, and Professor Essig's matchless line of blues.

If one is distracted from the iris by the marvelous roses and camellias in Mr. White's garden, just imagine what confusion is caused by the hundred varieties of fuchsias which thrive and bloom in the beautiful hillside garden of Professor Essig. His home is perched aloft on the hill above Berkeley, and from the broad window of an over hanging porch one looks down across the garden far and away, beyond San Francisco, to and through the Golden Gate. His garden is one of many levels with winding paths rock-banked and edged, with a pool fed by a murmuring spring. As with Mr. Berry, the nooks and corners are filled with unusual plant life so that one forgets to look at the iris until one realizes that here are the world's best blues—Pacific, California Blue, Pale Moonlight, Yosemite Falls, Sierra Blue, and finally the ultimate in blues, Shining Waters.

Everywhere I went I saw Easter Morn splendidly grown and very attractive. Professor Essig has many other promising seedlings across the street, but again time was too limited to properly inspect them.

Westward from Berkeley and above San Quentin on the peninsula, lies Mt. Tamalpais and Mill Valley with the redwood trees. In company with Mrs. Everett, Robert Schreiner, and Jesse Nicholls this region was visited and on the way we stopped at Mrs. Elizabeth Hardee's. Her house and gardens were very beautiful, and here I found also good seedlings with one particular gem outstanding, a pinkish lavender *Loetitia Michaud*—a very lovely thing. Leaving the Hardee's, the Scudder Ranch was visited with its long rows of standard varieties splendidly grown. Unfortunately the seedlings were not in full bloom, but here and there were pleasing blooms.

The thing that impressed me most on the coast was the intensive line breeding which was productive in two especial directions, the yellows and the lighter blues. These are unsurpassed. A beginning has been made in the deep red and blue purple classes, some worthwhile blends are appearing but none of the type of Jean Cayeaux, Zaharoon, Mary Geddes, or Coralie; nor do we see such things as Ayers has produced in his Burning Bronze or Mr. Kirkland in his new coppery iris of which Copper Lustre is the fore-

runner. As yet there are no Blue Velvets or Royal Beauties. One new plicata of the Los Angeles type, more boldly marked, I saw in Mr. Jory's garden—a real addition to the earlier ones of Mr. Mohr's.

All in all the hybridizers of the west coast have sustained the high standards set by Mr. Mohr, and in two fields, the tall bearded yellows and the blues excel all others.

It is to be hoped that tender parentage is now so attenuated that most if not all of the California iris will find a congenial home in Eastern Gardens.

OLD FAVORITES—What can compare with them? “Is it not curious that with our hundreds of novelties to select from we can select no substitutes among them all for certain gardening schemes? I would be glad to know if any members can suggest improved varieties comparable in use and tone to Her Majesty, Crimson King, Bluet, Tom Tit, Cluny, Barton Harrington, De-jazet, Reverie, or Iris King. I think they all date before 1920 and a few are far older and yet each maintains its hold in my affection and no rivals have been found. I like many of the new things also but it seems about time that some one spoke up for the old but not decrepit irises.”

OREGON IRISES

CARL AND LOUISE H. STARKER

■ The Pacific slope is a region particularly rich in iris species and varieties. The hunting and classifying of these plants is a very fascinating affair, and there is still a great deal of work to be done before the matter will be fully cleared up.

For several years we have been collecting iris plants and receiving plants from collector friends from all over the State of Oregon, but, curiously enough, instead of having our ideas on the various species of irises clarified by this research and collection, we find matters becoming more and more confused, and the ideas of the people who should know about these plants from actual working with them and collecting them, becoming more and more at variance. We think that this condition arises largely from the fact that a good many of the species, while sufficiently diverse to deserve the name of species, do quite closely resemble each other, while within the species there occurs such a wide variety of form and color that, unless a person is well acquainted with the different variations which occur in nature, he is quite likely to regard the various forms as species. Beside which it is quite within the range of possibility that the various species hybridize in nature, as the species seem to be quite fertile, and the localities in which they are found often overlap. In short, it seems to us that many of the native western irises are still in a state of fusion, as it were, and that one species tends to grade naturally into another, which sadly puzzles the poor botanist, and makes for endless worry and contention.

Mr. Dykes, the eminent British authority on irises made a reasonably clear division of the species found in our state, and in describing them we shall adhere to his classification, adding at the end those species which have been discovered since his death. There are other varieties in his classification besides those which we shall mention, but we are confining ourselves to those irises which are to be found growing wild in the State of Oregon.

In general the native irises seem to fall into two classes, one with comparatively large rhizomes, clothed in the broad tough remnants of the leaves of former seasons. In general habit they resemble *Iris ensata*, and have broad leaves of quite heavy substance.

There are two irises native to Oregon which belong to this group, *longipetala* and *Missouriensis*. They are on the whole very similar, so that a general description will do for both, with a few special notes of differences in the case of *Iris Missouriensis*.

Iris longipetala is a type of iris preferring a warm climate. It is found near the seacoast in the extreme southern part of Oregon, and in California. It is a nearly evergreen species which does not lose its old leaves until the new ones start to grow in the fall. The tall strong leaves, rising to a height of 18-24 inches are about $\frac{3}{4}$ to 1 inch wide, and are grayish green with a glaucous sheen. The stem, which is of the same height as the leaves, is quite stiff, and bears two flowers with a white ground heavily striped and splotched with lavender, so that the general effect of the blossom is a light lavender. The flower segments do not taper to a point, but are blunt, and often indented in the center.

Iris Missouriensis seems to be an upland form of *longipetala*, and is found in the central and eastern parts of the state, and ranges even further east. It differs from *longipetala* mainly in the foliage which is not evergreen, and in the fact that the flower stems are always longer than the leaves, which are both shorter and narrower than those of *longipetala*. The flowers are similar to the flowers of *longipetala*, but there is a lovely white form as well as the type which is variously veined lavender. In our estimation, *Missouriensis* is a finer garden form than *longipetala*, as it has a more delicate and graceful appearance, and the flowers, being borne above the leaves tend to show off to better advantage. It would seem, too, that this variety might be hardier in a colder climate, as it is an upland form and does not have the evergreen leaves of *longipetala*.

These irises need a somewhat heavy soil, and plenty of water during the growing and blooming season, although they can stand complete drouth after that, in fact in nature the ground in which they grow often bakes almost as hard as concrete in the summer.

The second group of native Oregon irises have slender rhizomes with comparatively few root filaments. The leaves are thick and tough and are notable for the fact that they turn a red-brown



Geo. C. Stephenson

IRIS MISSOURIENSIS

color when they die. Most of them have quite conspicuous pink or reddish color at the base of the leaves. They have almost innumerable color variations, and a long blooming season.

Iris tenuis is a rare iris, and a very lovely one when it is well grown. It is found only in rather deep woodland and in a few spots along the Clackamas and Molalla rivers, and as the country along these rivers becomes more settled, and the fir forests destroyed, the plant becomes harder and harder to find. It has in fact entirely disappeared from two or three of the places where we used to find it in abundance.

It differs from most irises in that it needs a rather heavy shade to do really well. The pale green leaves are about a foot long and half inch wide, and of a more delicate and thinner texture than most of our native irises. It differs from all other western irises in having a deeply forked stem. In nature the rhizomes creep widely and produce somewhat scanty tufts of foliage with only a few flowers, but when the plant is suited in cultivation, it changes quite surprisingly in habit. The growth becomes more compact and the flowers much more numerous. Some of our plants which bloomed last season had from twenty to thirty flowers, and when these faded, more came on.

The blossoms, which are smaller, and perhaps not so showy as some of the other native irises, are nevertheless very delicate and lovely. The flower segments are relatively wide in proportion to their length and the blossom has a flatter look than is common to most of our native species. The color is a creamy white very faintly veined with purple, and with a yellowish splotch on the throat.

Iris bracteata is to be distinguished from other irises by the fact that while the upper surface of the leaves is glossy, the under surface is of a dull, glaucous character. The rootstalk is a slender creeping rhizome with few branches which produces its leaves in scanty tufts. The stem which is shorter than the leaves is clothed in several bract-like leaves, a fact to which the plant owes its name. The base of the shoots are quite highly colored with brown or red on the new growth. The flower, which is large and wide-petalled opens out quite flat. It is of a bright yellow color more or less marked with brownish-purple veins. It varies less widely than do most of the native species. It is a lovely garden plant, as the flowers are quite large, lovely in color, and of a pleasing form and substance.



Geo. C. Stephenson

IRIS CHRYSOPHYLLA

Iris macrosiphon is different from the other native irises because it has a short stem and a long perianth tube, sometimes as much as three inches long. The leaves are either bright green or somewhat glaucous, and the flowers vary endlessly in color through red and purple, blue and even white, and in some cases the color of the flowers on the same plant will vary.

Chrysophylla is similar to *Iris macrosiphon*, but the leaves seem to be lighter green in color and more yellowish. The flowers are of a creamy white with a few golden veins which sparkle in the sun.

Iris Douglasiana is a very robust species which grows near the seacoast in southern Oregon and California. The strong ever-green foliage is of a deep bluish green color and grows in very dense tufts. The flower heads of two to three blossoms are borne on stems but little longer than the foliage. The blossoms which are quite large and somewhat ruffled, vary widely in color from white forms to deepest purple, and the habit of the plant, too, seems to vary to some extent, as some forms seem to have much more robust foliage than others; some forms, too, are much more floriferous than others. This is a generally satisfactory plant in the garden, but to our mind, it is not so beautiful in the garden as *Iris tenax*, as its heavy tufts of foliage tend to somewhat obscure the beauty of the blossoms.

Iris tenax is the iris common on the hillsides and in the fields all through the western part of Oregon and Washington, and though it is so common that many people disdain it, its real value as a garden plant is beginning to be realized. Its leaves are more slender than those of the *Iris Douglasiana*, and its tufts of lighter green foliage are looser and less dense; in fact the whole plant has a looser, more graceful appearance. The flowers which are usually borne singly are in general quite similar to those of the *Iris Douglasiana*, although they are not so much ruffled. They are larger in proportion to the size of the plant, and seem to be more graceful and showy. There seems to be a wide difference of opinion about the stem length of this iris, and most authorities place it somewhere between three and six inches. In this part of the country where it is most common and at its best, however, it is more nearly between eight and ten inches. This is a plant that tends to improve under cultivation; the flowers be-



Geo. C. Stephenson

IRIS TENAX, BLUE FORM

come larger, finer and more ample, the stems grow longer, and the whole plant seems to expand under the genial warmth of a little care and attention.

Although we have been familiar with this iris for many years, and have realized the fact that it varied widely, it is only quite recently that we have had its extreme range of variability completely brought home. This spring we had the pleasure of visiting the garden of a collector friend who has spent several years in collecting the various color forms of this iris while the plants were in bloom. There we saw all shades and colors strikingly displayed and it was indeed a revelation to us. There were pure white forms, beautifully marked with gold down the center of the falls, there were cream colored and apricot forms; there were white blossoms edged with pink; there were pearl gray flowers; there were blossoms of orchid, lavender, blue, and deepest purple strikingly set off by a white blotch in the center of the falls, and there were other color variations almost without end. The flower segments, too, varied in width, some were quite wide and ample and others were more narrow and delicate. In many cases the plants were so full of bloom that the foliage could scarcely be seen.

The blossoms of *Iris tenax* make very good cut flowers, and a bouquet of the various color forms is most unusual and charming.

Iris Gormanii is one of the vexed species which some authorities declare has no right to be a species at all. It seems to be almost exactly like *Iris tenax*, except that the plant is perhaps a little more slender in growth, and the flowers are a bright yellow. It is found only in a comparatively restricted area in the coast range mountains of Oregon, and while it may deserve rank as a species, it would seem that this might be doubtful in view of the fact that *tenax* itself presents so wide a variation in colors. So far as the gardener is concerned it can be treated as if it were *tenax*, and welcomed into the garden where it will prove to be a very satisfactory plant.

Iris innominata is a newly discovered species of great beauty which is found near the coast in the southern part of the state. Its deep green foliage is quite grass-like, although of a heavy texture, and is about 8-12 inches in length. When well established it forms quite good-sized tufts of leaves, although the plants



Drew Sherrard

IRIS GORMANI

do not seem to be quite so robust as those of *tenax*. It is very floriferous, and a well grown specimen will produce flowers in such abundance that they completely hide the foliage. This is a very lovely thing with fine, much ruffled flowers of varying shades of yellow, more or less marked with brown lines and reticulations. Some plants have almost clear yellow forms, some are more nearly apricot, and some are a deep butter yellow, while some are orange. We have been told that there are lavender and purple forms, but we have never seen any of these. We have no doubt that when this iris is better known that further color variations will appear.

All the irises in the group just described seem to enjoy a loose soil enriched with leaf mold and humus. Although many of them grow in the open in nature, we have found that they do better in the garden if they are given a little shade. We think this is easily explained by the fact that in nature they are somewhat shaded by weeds and grass after they have flowered, and are not weeded and left to stand alone in the bed as they are in the garden.

These plants have in the past acquired a bad name for being hard to transplant. This has been the fault of the grower, however, and not of the plant. He has failed to realize that these plants cannot be shipped when they are dormant, but must be moved when growth is active, either in early spring or after the fall rains have begun. By observing these simple rules, we have shipped many of these irises to the Atlantic coast, and they not only grew, but flowered the following season. It is true, however, that these irises will do better if they are left alone after they are once established, and are not really at their best until they have been established for two or three years.

The endless variations in color and form, and the near approach of one species to another among these irises offers a very tempting field for experiment and research. We are sure that many interesting and beautiful varieties should be obtained with a little patience and skill.—JENNINGS LODGE, OREGON.

DISTINCTIVE POINTS IN DESCRIPTIONS

R. S. STURTEVANT

■ In assembling descriptive data of varieties and in attempting to extract from such a mass of detail the few characteristics which, as a group, may serve to identify a specific variety the importance of minor variations is greatly emphasized. And equally strongly do we realize that most of our descriptive terms are impossible of definition.

All descriptions of growth and of measurement (of either foliage, stalk, or flower) vary with cultural and climatic conditions. We can use extremes only; very broad leaves, very weak growth (though few such achieve introduction), very large, or very small. And, even then, the reader must compare the leaf or flower to that of other varieties grown under the same conditions to perceive the little below, or above, the average.

Carriage, the angularity of the branch (if developed) as it leaves the stalk, to a lesser degree, the varying arches of standard, of fall, or style-branch, all tend to be less dependent on growing conditions. But again it is only the exceptional that we can quote as a distinguishing characteristic. Certain varieties are short, high, and close branched as in the old *pallidas*, others branch at a 45 degree angle (many *pallida-variegatas* and even *kashmiriana* derivatives) while still others, under good conditions, develop four long branches and even side branches forming a candelabra. Dominion gave us a race of short branched varieties, the buds often pointing toward the stalk and hence crowding the flowers. The same crowding may be due to fastigate branching, and is present all too often in our novelties when we see well-grown specimens. Few are well (4 or more) branched. (Poor growth means few branches and, hence, no apparent crowding in many cases.)

Carriage in the segments of the flower (as does the depth and hue of color also) varies with the age of the bloom even more than with varying culture or weather. Under extremes of heat or moisture only flowers of exceptional substance develop anything but floppy standards and straight-hanging falls. We try again to pick a normal development and, to an extent, an erect standard will tend to fold on itself and the arched standard to flop down on the style-branches.

Color, if it empurples the base of the leaf sheaves or spathes seems a reliable point; if it tinges the hairs of the beard with brown or blue, tips them with orange it is to be looked for eagerly and immediately as a distinguishing characteristic; as a flush, as a wire edge to the segments, as a reticulation on haft and claw it may easily prove identification. (Flecks such as we find in W. R. Dykes and many other yellows are variable). You may note that in each case such an area of color is apt to be so small (or so elusive) that it is not readily compared to a chart and is hence more easily understood as a descriptive term.

In plicatas, the pervading color or hue of the markings is usually intensified on the style branches and, in many blends also, the color so located indicates the predominance of yellow, or blue, or red in the general effect.

In hafts, the ground color may be white, light, or citron yellow in contrast to the color of the blade of the fall or it may be suffused with the blade color (and hence inconspicuous) or it may be sparsely or closely set with fine or heavy reticulations. The conspicuously light haft (as in Aphrodite) tends to destroy the unity of the color effect. The richly yellowed haft, particularly if emphasized by a projecting orange beard gives life and warmth and brilliance to many a white or blend. And among the novelties there is a most interesting group of darks enlivened by reticulations of ochre, morocco, or brick red. Both as a distinguishing characteristic and for garden effect the color of the haft is of almost vital importance.

The broad areas of standard and fall do not lend themselves to accurate color descriptions, especially among the blends. Though chart comparisons are made out of direct sunlight and flowers of about the same age are used, descriptions made in different gardens, by different people, or on different days will vary a few hues at the best. The hues may remain relatively deeper, or pinker, or bluer, in certain localized areas (as below the beard, at the edge) but that is all. Hence the layman should not be too discouraged at a color description taken from Ridgway's Chart. The name of the color may well carry some picture to his mind, but where it occurs is even more important.

The actual shape of a standard or often of a fall (oval, oblong, or whatnot) so rarely affects the appearance of the flower that

I rarely note it. The oblong blade of a straight-hanging fall may enhance the lop-eared effect of the flower, or we may prefer a circular blade to the broad wedge of blade and haft. We do value breadth in petal, in haft, even in claw of standard as we dislike a spidery bearded iris flower.

And now for a few general observations as to these particular descriptions and their reliability. Before 1928 when the last lot was published I knew and could compare perhaps 90 per cent of the current varieties. That is now far from being the case and the resulting descriptions are consequently just that much less helpful. In themselves they are as accurate, but it is not possible to give added emphasis to the general effect which often makes a well-known variety unforgettable.

Let us consider a batch of new whites. In Selene and Parthenon the base of the foliage is empurpled which sets them apart from most of the others; Selene has more straight-hanging falls that occasionally pinch a bit, the naphthalene yellow flush on the haft is *finely* reticulated olive ochre; in Parthenon the *heavy* reed yellow to olive yellow reticulations are equally widely spaced. My impression is that Parthenon far excels Selene in size and carriage and yet those heavy reticulations are all I can express in words as reliable points of distinction. If I were more familiar with the two varieties I probably could never mistake one for the other. Looking to Gudrun which memory tells me is much more compact, a fuller bloom and not be confused with the other whites, I find a conspicuous, projecting orange beard that is not paralleled in Purissima, Easter Morn, Sitka, Wambliska, New Albion, Venus de Milo, or even Polar King with its equally conspicuous yellow beard, or Micheline Charraire with its conspicuous but merely orange tipped beard and the added points of chrome to chestnut reticulations.

Now for the Purissima, Venus de Milo and Easter Morn group, the first with a greenish mid-rib to the standards and a very few rather dark purple reticulations on the claw (darker than those of Easter Morn) and a short white beard; the second with pale lemon reticulations on the haft which is also inconspicuous, and the third with clear reed yellow reticulations on a conspicuous haft (the edges of the falls also serrate). In Polar King the more olive reticulations seem to cast greenish reflections on the

standards. In New Albion we have the purest haft and it may be differentiated from Purissima by its orange tipt beard and more flaring falls. In Sitka we have a channeled haft conspicuous for its blurred heavy greenish yellow reticulations. Its bluish white standards suggest the bluish white of Lady Gage (yellow, orange tipt beard) or Wambliska (with olive buff to yellow haft reticulations and prune purple claw reticulations).

Now, of the lot I know Easter Morn the best but I could easily mistake a poor Easter Morn for a good Venus de Milo. Sitka or the lower Lady Gage I might distinguish from Wambliska. Polar King has almost too heavy a stalk, Selene and Parthenon too open flowers but if you added to all these mentioned Micheline Charraire, Argentina, Bolingbroke, Sophronia. Snow White, Chartier and many more I could group them as variegata whites, as pallida whites, as Kashmir whites, or cypriana-mesopotamica whites but, from memory, I should never be able to differentiate one from another in the same group. In one garden, in one season, any one of the lot may be superb. We tend to remember that climax and hesitate to recognize the variety in poor condition.

With this example of the difficulties of identification and description taken from the whites you can well imagine the possibilities among blends, or reds, blues, or even, nowadays, yellows. The happy days of really knowing irises are gone. One must guess or, in a few cases, go to a stock description which may or may not prove adequate. I wonder how soon some of us will specialize on collecting only irises of a given color.

DESCRIPTIONS OF VARIETIES, PART VI

R. S. STURTEVANT

Previous descriptions of varieties together with introductory notes and definitions will be found in Bulletins 6, 7, 9, 12, and 29. With each passing year it has become less possible to secure adequate descriptions as few breeders record completed data cards.

In selecting varieties to describe we attempted to include such as had received awards and we were sadly handicapped by the poor bloom resulting from the winter of 1933-34 in New England. With few exceptions varieties are described as seen in New

England in 1934 and include a surprising number of so-called tender varieties.

Ratings are not given as the annual ratings of 1931 and 1932 were based on different score cards and were not given the same permanence as those of the 1928 symposium.

Names of both originator and introducer are given. Dates are of registration and of introduction and indicate the growers who comply with registration requirements.

Color classification is both by word (as in previous descriptions) and by letter and number in accordance with the color classification given in the Alphabetical Check List; viz., W—white; B—blue toned; R—red toned; S—blend; Y—yellow: the numbers 1, 2, 3, indicate a blue tone of W, R, S, or Y; the numbers 4, 5, 6, a yellow tone; of 7, 8 9, a pink to red tone; furthermore the numbers 1, 4, 7 indicate also a self color; 2, 5, 8, plicata; 3, 6, 9, bicolor. L, M, and D. light, medium, and dark.

Seasonal indications are given by the letters B, early; M, medium; F, late. As this system was initiated in 1932, not all varieties have been recorded. It should be remembered that a variation of a few days in New England may correspond to bloom over a few months in Southern California (e. g. San Gabriel).

All color terms are referred to “Color Standards and Nomenclature” by Robert Ridgway (see also Bulletin 6 for an outline of terms).

Awards. Unless otherwise specified awards are given by the A. I. S. either annually or to flowers on exhibit. No such A. M. has been given to any cut-flower—R.H.S.—Royal Horticultural Society. N.H.F.—Nationale Societe d’Horticole de France.

ALCINA

Bicolor, blend M-S3L

Connell 1927-1931

Brief. Large; S. deep olive buff slightly flushed with the deep lavender of the falls; 30 in.

Details. S. arching; F. drooping to straight-hanging; haft and beard conspicuous; very fragrant.

Remarks. A full flower, excellent in mass; apparently the gray blue sister of Nepenthe and Audabe.

ALLURE

Self, blend S4L

Murrell 1927

Brief. Pale olive buff; F. flushed pale laelia pink, the haft conspicuous pale citron yellow; 40 in.

Details. Flower open, not large; S. arched; F. drooping; stalk well and widely branched; beard pale yellow; spathes scarious.

Remarks. A clear and taller Mady Carriere.

ALTA CALIFORNIA

Bicolor, blend S6D

Mohr-Mitchell 1931

Brief. Of Caterina shape and habit; S. mustard yellow; F. olive buff flushed vinaceous; 4 ft.

Details. S. domed; notched; F. drooping; haft conspicuous, closely dotted and veined; beard yellow orange.

Remarks. Color of Endymion, a deeper Gilead.

ALTIORA

(Raleigh x Gabriel)

Bicolor B1L

Bliss-Sturtevant 1932

Brief. Stalk well-branched; S. bluish lavender with tips adpressed; F. lavender violet fading mauve at edge, flaring to drooping; 45 in.

Details. Spathes inflated, with keel; beard white, yellow tip.

Remarks. Blue tone of E. H. Jenkins or Azure.

AMANULLAH

Bicolor B1L

Baker, G. P. 1932

Brief. Long, open; S. bluish lavender; F. pleroma violet fading at edge, conspicuous cream haft heavily reticulated morocco red; 39 in.

Details. S. arching; F. straight hanging; spathes scarious; beard yellow, projecting; styles buff with yellow keel.

Remarks. Similar to Mardi.

ANNDELIA

Plicata, W2L

Sturt. 1928-1929

Brief. White, thickly dotted Chinese violet; center light; 33 in.

Details. High branched; S. domed; F. drooping, waved; beard white, orange tip.

Remarks. A much paler Parisiana.

AURIFERO

(Marian Mohr x —) x Sherbert

Self B1L

Mohr-Mitchell 1923-1927

Brief. Low and widely branched; very pale wistaria violet to bluish lavender, the haft conspicuously flushed amber to wax yellow; 45 in.

Details. S. domed; F. straight hanging; beard projecting, conspicuous, orange tip.

Remarks. The yellow haft suggests a blend rather than a self.

AVONDALE

(— x Rameses)

Bicolor, blend R9D

Sass, H. P. 1933

Brief. Rich; S. magenta flushed Hays russet; F. dahlia purple; haft and styles amber, conspicuous; beard orange, conspicuous; 33 in.

Details. S. arching revolute; F. straight hanging, ruffled.

Remarks. Described as a one year plant.

BALDWIN

Self B7M

Sass, H. P. 1926-1927

Brief. Lavender violet with bluish flush below beard and an almost solid hydrangea red reticulation on haft; 40 in.

Details. S. with tips adpressed; F. drooping to straight hanging; beard bluish, yellow tip; styles over arching; spathes flushed.

Remarks. Excellent mass.

BLACK WINGS

Bicolor B7D

Kirkland 1930

Brief. Well and widely branched; S. Hortense violet, wire edge; F. velvety prune purple; 3 ft.

Details. S. arching, revolute; F. flaring to drooping; haft blurred; beard brown specked; spathes scarious, with keel.

Remarks. Of midnight blue effect. Compare with Mephisto or Rhadi. H. M., 1931.

BLUE AND GOLD

(California Blue x Louis Bel)

Self B1D

Essig 1929-1931

Brief. Well-branched; lavender violet, the broad haft reticulated pompeian red; 3 ft.

Details. S. arching to overlapping; F. drooping; texture slightly creped; beard conspicuous, orange tipt.

Remarks. Excellent mass. A lower Sierra Blue or Santa Barbara.

BLUE JUNE

(Sensation x —)

Self B1M

Donahue 1931

Brief. Widely branched; pale bluish lavender to bluish lavender with conspicuous light haft; cream edge to styles; 40 in.

Details. S. erect; F. flaring to drooping, waved; beard conspicuous, yellow-orange; very fragrant.

Remarks. Charming mass of smoothly finished flowers; deeper than Mary Barnett.

BRONZE BEACON

(Coronado x Glowing Embers)

Bicolor, blend S6M

Salbach 1932

Brief. Long and widely branched; S. flushed vinaceous fawn, dark wire edge; F. deep dahlia purple fading to edge; heart of flower and styles primuline yellow; 4 ft.

Details. Foliage tinged at base, also spathes; S. conic; F. drooping; haft reed yellow to white, conspicuous and heavily veined morocco red; beard conspicuous, brownish, orange tipt.

Remarks. Reported as very late; a warmer Picador.

BUECHLEY'S GIANT

Self B1L

Buechley 1932

Brief. Large; light haft and styles; S. pale lavender violet fading lighter; F. pleroma violet fading to pale mauve at edge; 4 ft.

Details. A spreading flower; S. erect; F. drooping with flaring tips; beard projecting, orange tipt.

Remarks. Might be described as a paler Titan.

BURMAH

Self B1M

Pilkington 1930

Brief. Spreading, compact flower; S. pleroma violet; F. anthracene violet, the ivory yellow haft heavily reticulated morocco red; 39 in.

Details. S. domed; F. flaring to drooping; beard bluish, orange tipt.

CALIFORNIA GOLD

Self V1D

Mohr-Mit-Salbach 1933

Brief. An oblong, compact flower, rich empire yellow, the broad haft finely reticulated raw sienna; 39 in.

Details. S. arching; F. drooping to straight hanging; beard projecting, orange.

Remarks. Described as a yearling, the color of Pluie d'Or but effect richer and a much larger flower.

CINNABAR

Biolor S9D

Williamson 1928

Brief. Branched below center; S. amethyst violet; F. velvety prune purple the haft blurred with morocco red; 40 in.

Details. S. arched, rounded at tips; F. drooping to straight hanging, circular; beard projecting, yellow tipt.

Remarks.

CLARA NOYES

Bicolor, veined blend S9L

Sass, H. P. 1930-31

Brief. Very ruffled flower; S. fawn to russet vinaceous; F. widely veined livid brown on amber yellow; 33 in.

Details. Widely branched; wire edge on S. & F. S. frilled and fluted; F. drooping, ruffled; beard orange; the pale purplish vinaceous haft conspicuous, the orange beard not.

Remarks. A lovely pinkish apricot mass for the garden. H. M., 1931; A. M., 1932.

CLAUDE AUREAU

(Claude Monet x Bruno)

Bicolor Y9D

Cayeux 1928

Brief. S. olive lake to mustard yellow; F. velvety pansy purple bordered olive lake; 2 ft.

Details. Well-branched; S. erect; F. flaring to straight hanging; haft conspicuous; beard orange.

Remarks. A fine rich but blended variegata. C. M., N. H. F., 1928.

COPPERSMITH

Bicolor, blend S7M

Shull 1926

Brief. Compact flower; S. light purplish vinaceous; F. flushed dull magenta, the light haft reticulated cinnamon rufous; 42 in.

Details. S. & F. with dark wire edge; S. with tips adpressed; F. drooping, quirked at tip, very smooth; spathes flushed.

Remarks. H. M., 1926.

CORONATION

Self YD

Moore 1927

Brief. Widely branched; empire yellow throughout; 3 ft.

Details. Foliage tinged at base; S. overlapping; F. flaring to drooping; haft and claw slightly reticulated and flecked maroon; beard projecting, orange tipt.

Remarks. Excellent garden effect; flecked occasionally; appears deeper than Pluie d'Or.

CYDALISE

Plicata Y5

Cayeux 1930

Brief. S. amber to wax yellow at base; F. white, flushed lavender violet at edge and fading veins burnt lake; 3 ft.

Details. High, though widely branched; S. domed; F. flaring; beard amber tipt.

Remarks. A big Montezuma but much less yellow. C. M., N. H. F., 1930.

DAUNTLESS

(Cardinal x Rose Madder)

Bicolor R9D

Connell 1927-1929

Brief. S. light perilla purple flushed magenta; F. velvety amaranth purple to Bordeaux with conspicuous white to cream haft and orange tipt beard; 3 ft.

Details. Foliage and spathes tinged; S. with tips adpressed, revolute; F. flaring, ruffled; haft reticulations widely spaced, morocco red; styles color of S.

Remarks. Almost a self in effect. Dykes Memorial Medal, 1929.

DAY DREAM

(Dejazet x Sherbert)

Bicolor, blend S6L

Sturt. 1924-1925

Brief. Short and low branched; S. cream buff flushed vinaceous cinnamon; F. pale rosalane purple; haft and styles yellowed; 40 in.

Details. S. arching, slightly fluted; F. drooping; beard conspicuous, orange-red tip.

Remarks. Segments appear too narrow for the height.

DESERT GOLD

Self Y4L

Kirkland 1929

Brief. Very pale maize yellow, the conspicuous haft heavily reticulated citron yellow at sides; 3 ft.

Details. Rather high and short branched; S. arching, rounded, a bit creped; F. flaring to drooping, satiny; substance exceptional; beard projecting, conspicuous, orange; claw reticulated at base an almost prune purple.

Remarks. H. M., 1931. A. M., 1932.

DOROTHY DIETZ

Wyomissing x (Leurt A. Williamson?)

Bicolor W6D

Williamson 1929

Brief. S. light lavender violet tinged with cream at center; F. velvety anthracene violet fading lighter but with dark wire edge; 3 ft.

Details. S. erect, revolute; F. drooping, the tips quirked; beard projecting, white, yellow tip.

Remarks. Comparable to B. Y. Morrison, but bigger and with more conspicuous haft.

DOXA

Self, blended LB-S6L

Sass, H. P. 1928-1929

Brief. Early; stiff substance; pale sulphur yellow shading to olive buff at center, the haft flushed diamme brown to a warm blackish purple; beard conspicuous, orange; 18 in.

Details. S. overlapping; F. flaring.

Remarks. A queer, unforgettable bloom of exceptional substance.

DUART

Bicolor, blend M-S7

Ayres 1930-1931

Brief. Well-branched; S. honey yellow with wire edge; F. mineral red flushed fawn at edge; the haft, conspicuous, strontian yellow to white; 40 in.

Details. S. arching, revolute; F. drooping to straight hanging; beard conspicuous, orange; styles broad, with wire edge.

Remarks. Like Dauntless but with a yellow tone throughout.

EASTER MORN

California Blue x (Argentina x Conquistador)

Self M-W4

Essig 1931

Brief. Well-branched; large, clear white, with reed yellow reticulations on haft and sparse purple ones on claw; S. arched, pointed; F. flaring, with serrate edge; beard, white, orange tip; conspicuous; 42 in.

Details. Substance exceptional; haft and styles very broad, crests fringed.

Remarks. H. M., 1931; Successfully grown in Illinois and Massachusetts.

ELIZABETH EGELBERG

Bicolor R3L

Egelberg 1930

Brief. Spreading flower; S. light amparo purple; F. phlox purple, with conspicuous light haft and yellow beard; 42 in.

Details. Branched below center; S. domed, short; F. flaring to drooping, conspicuously wedge shaped, blunt.

Remarks. Coloring of Frieda Mohr. Flower rather triangular in effect.

EROS

Self, blend S9M

Mead-Riedel 1931-1933

Brief. Pale vinaceous, flushed cameo pink, the falls with a deeper flush; 3 ft.

Details. Well and widely branched; S. arching, ruffled; F. drooping; haft narrow, colonial buff, reticulated honey yellow; beard yellow.

Remarks. Suggestive of Talisman but far finer in New England.

FLAMINGO

(Lent A x —)

Bicolor, blend S9M

Williamson 1929

Brief. S. daphne pink; F. perilla purple; a vivid orange beard on a conspicuous reed yellow haft; 3 ft.

Details. Foliage glaucous, tinged at base; S. erect; F. drooping, rounded; the sparse reticulations rufous.

Remarks. A paler Red Flare.

GUDRUN

Self W

Dykes, K. 1931

Brief. Large; low-branched; a creped, slightly grayish white; beard projecting, conspicuous, orange; 3 ft.

Details. S. domed, slightly undulate; F. flaring to straight hanging, the stiff mid-rib green on the reverse side; haft broad, not conspicuous.

Remarks. C. M. R. H. S. 1930; A. M. 1931; Dykes Medal (English) 1931. Described as a one year plant.

HAPPY DAYS

(— x W. R. Dykes)

Self EM-Y4H

Mitchell-Salbach 1933

Brief. Large, long; amber to primuline yellow at center; projecting beard orange; 39 in.

Details. Well-branched; S. arching, notched at tip; F. drooping; haft broad, primuline yellow, finely reticulated morocco red; beard dense, fine; styles over arching.

Remarks. Described as a one year plant. A deeper, more open flower than W. R. Dykes

HELIOS

Self Y3L

Cayeux 1928

Brief. Napthalene yellow, the falls very faintly veined lavender; beard and haft not conspicuous; 3 ft.

Details. Branches rather long, fastigiate; S. arching, with tips adpressed; F. rounded, drooping; haft edged citron yellow; beard, yellow, orange tip; styles erect.

Remarks. A paler Desert Gold; usually less well budded and branched. C. M. N. H. F.

HERMITAGE

Bicolor H-RIM

Kirkland 1928-1930

Brief. Well-branched; S. Argyle purple flushed amber yellow at base; F. dahlia purple fading to Hortense violet; 3 ft.

Details. Foliage tinged at base; S. arching; F. drooping; haft conspicuous, white at center, an almost solid morocco red at edge; beard conspicuous, yellow-orange; styles amber yellow.

Remarks. A lighter Jeb Stuart. H. M., 1930.

HOLLYWOOD

(Sindjhka x Magnifica)

Bicolor, blend S9M

Essig 1929

Brief. S. Rosolane pink fading to primrose yellow at center; F. Mathews purple fading lighter at edge; haft white to citron yellow, conspicuous, reticulated Kaiser brown; 42 in.

Details. S. overlapping, slightly ruffled at edge; F. drooping to straight hanging; beard, sparse, projecting, orange.

Remarks. A pinker Mary Geddes.

IMPERIAL BLUSH

Self F-R7L

Sass, H. P. 1932

Brief. A very pale Hortense violet, lustrous, with darker, over-arching styles; 39 in.

Details. Foliage slender; stalk rather high and short branched; flower spreading; S. arching to domed; F. drooping; haft inconspicuously reticulated veronia purple; beard, white, orange tipt.

Remarks. "An improved Pink Satin."

JADU

(Aksarben x —)

Plicata W2

Sturt. 1930

Brief. Palest Hortense violet, the center of F. white, the haft veined and dotted maroon purple; 3 in.

Details. S. domed, frilled; F. drooping, ruffled; beard dense, projecting, yellow, orange tipt; style crest cream buff.

Remarks. Comparable to Anndelia

JEB STUART

Bicolor, blend S7D

Washington-Nesmith 1932

Brief. Compact; S. purplish vinaceous to vinaceous buff, lustrous; F. very velvety violet carmine lit with morocco red reflections from the haft reticulations; 3 ft.

Details. Foliage rather slender; S. conic; F. drooping, rounded; beard projecting, conspicuous, yellow-orange.

Remarks. Unusually rich, brownish in effect.

KARAGDAH

Self S4L

Baker, G. P. 1931

Brief. Light to lavender violet, flushed deeper below beard, the broad haft closely reticulated morocco red; 3 ft.

Details. Compact; S. domed; F. flaring; beard, bluish, yellow tipt; styles over-arching.

Remarks. With the charm of Lady Lavender but brighter.

KING JUBA

Bicolor, blend S7D

Sass, H. P. 1930

Brief. Segments dark edged; S. chamois; F. velvety blackish purple, the conspicuous haft olive buff to white; beard conspicuous, orange; 30 in.

Details. A long flower; arching, fluted; F. drooping to straight hanging, oblong.

Remarks. A rich Niebelungen. H. M., 1932.

KING PHILLIP

Self E-B7M

Fewkes-Nesmith 1934

Brief. An oblong flower, light lavender violet to lavender violet, the haft flushed deeper and finely reticulated congo pink; 3 ft.

Details. S. domed, revolute, undulate; F. straight hanging, a bit waved, beard conspicuous, bluish, orange tipt.

Remarks.

KING TUT

Bicolor, blend S6D

Sass, H. P. 1926

Brief. S. vinaceous fawn with a dark wire edge; F. velvety F. Hay's maroon, the conspicuous haft empire yellow; 30 in.

Details. S. erect; F. flaring to drooping, ruffled at tip; beard projecting, orange; styles over-arching, the buff yellow crest fringed.

Remarks. Effect rich. Chromosome number 36.

KLAMATH
(Ambassadeur x Titan)

- Bicolor S4M Kleinsorge 1929
Brief. Large, open; S. lavender violet, opening to expose the conspicuous ochre red reticulations on haft and claw; F. pedroma violet; 33 in.
Details. Foliage broad; S. erect, stiff, revolute; F. flaring, a bit ruffled, stiff; beard, projecting, brownish, orange tipt; styles with buff crest.
Remarks. Jeannette May Kennedy is very similar but redder in effect.

LINDBERGH

- Bicolor B3M Arbuckle 1927-1928
Brief. S. pale lavender violet; F. pleroma violet with lighter edge, the haft conspicuous, heavily reticulated on white; 33 in.
Details. High branched; S. erect, revolute, ruffled; F. drooping, ruffled; beard white, yellow tipt.
Remarks. Similar to Eckesachs.

LOS ANGELES

- Plicata W2 Mohr-Mit. 1927
Brief. Large, white, the pale blue lavender dots and reticulations confined to the sides of the blade, the haft, and crest of styles; 42 in.
Details. Well and widely branched; S. domed, circular; F. flaring to drooping, circular; beard conspicuous, orange tipt; clover scented.
Remarks. More popular than the more heavily bordered San Francisco. Chromosome No. 49.

MARDI

- Bicolor S6 Baker, G. P. 1932
Brief. Well and widely branched; S. hyssop violet; F. nigrosine violet fading to mauve at edge, the conspicuous, citron yellow to white haft heavily veined morocco red; 4 ft.
Details. S. overlapping; F. drooping with flaring tips; beard conspicuous, white, orange tipt; styles buff and lavender.
Remarks. A richer Lent A. Williamson.

MARY GEDDES

- Bicolor, blend S7L Stahlman-Washington 1930
Brief. Foliage tinged at base; S. vinaceous fawn to buff pink; F. vernonia purple fading to cinnamon drab below beard; haft, conspicuous brilliant picric yellow; beard orange; 3 ft.
Details. S. arched, rounded at tip; F. flaring to drooping, flat with median yellow line; spathes flushed.
Remarks. Vishnu coloring but much brighter. H. M., 1930, A. M., 1933. A. M., R. H. S., 1933.

MELDORIC

(mesopotamica x Eldorado) x Dominion

- Bicolor B7D Ayres 1931
Brief. Foliage tinged at base; well-branched; S. Hortense, violet with dark wire edge; F. very velvety prune purple, the broad haft a rich sanford brown; 4 ft.
Details. S. conic, fluted; F. flaring with drooping tips; beard, conspicuous, white, orange tipt.
Remarks. H. M. 1931.

MIDGARD

- Bicolor, blend S4L Sass, H. P. 1926
Brief. Pale to Vinaceous lilac, the center of the flower pinard yellow fading to warm buff; 33 in.
Details. High and short branched; S. cupped, fluted; F. drooping to incurved, ruffled; beard yellow tipt.
Remarks. A pinkish yellow blend.

MOON MAGIC

(Sophronia x Coppersmith)

Self YL

Shull, 1931

Brief. Ivory yellow deeping at center to the empire yellow reticulations of the haft; exceptional substance; 4 ft.

Details. Rather short branched; S. domed; notched; claw flecked maroon; F. flaring, convex; beard, yellow, orange tipt.

Remarks. H. M., 1932.

MOTIF

(Sherbet x Gaudichau) x Moa

Bicolor M-B7D

Sturt. 1929-1931

Brief. Large; S. brilliant hyacinth violet; F. velvety fluorite violet; 33 in.

Details. S. domed; F. flaring to drooping; haft broad, heavily reticulated; beard bluish, yellow tipt; spathes flushed.

Remarks. Even darker than Meldoric.

MRS. VALERIE WEST

(Dominion x —)

Bicolor, blend S7D

Bliss-Wallace 1925

Brief. Large; S. light purple drab with purple sheen towards center; F. very velvety blackish red purple lit by yellow beard and haft; 3 ft.

Details. Rather short branched, buds pointing in; S. domed, rounded at tip; F. flaring to drooping; styles, short, overarching.

Remarks. A sister seedling of Grace Sturtevant but less richly brown. F. C. C., R. H. S. 1933

NATIVIDAD

(Aurifero x "Yellow seedling")

Self W4

Mit.-Sal. 1930-1932

Brief. Large, a waxy cream white, the yellow deepening at the center to beard and conspicuous haft; 38 in.

Details. Stalk stout; S. domed; F. drooping, the tips incurving, waved, almost velvety; styles broad, erect; crest very finely fringed.

Remarks. Texture and substance trace back to Miss Willmott on both sides.

NEPENTHE

Bicolor, blend S4L

Connell-Kellogg 1927-1931

Brief. Foliage tinged at base; large, lustrous; S. domed, olive buff; F. vinaceous lavender fading to olive buff at edge and apricot yellow at haft; 30 in.

Details. Rather high and fastigate branched; very fragrant; beard sparse, projecting, yellow; styles narrow.

Remarks. Between Alcina and the yellower aubade in color, similar habit and form.

NEW ALBION

California Blue x (Argentina x Conquistador)

Self M-W4

Essig-Milliken 1931

Brief. Large; S. erect, bluish white, frilled and fluted; F. flaring, a bit waved; beard white, orange tipt, not conspicuous; 39 in.

Details. Well branched; substance exceptional; haft only faintly reticulated.

Remarks. Fall bloom reported in 1931.

NUMA ROUMESTAN

Bicolor, blend S9M

Cayeux 1928

Brief. Rich; S. magenta; F. brilliant, dull dusky purple with haft heavily reticulated Prussian red, the orange beard brown specked; 33 in.

Details. High but widely branched; S. arching; F. drooping, a bit ruffled at edge; styles with amber yellow keel.

Remarks. A redder Labor, not large but distinctively rich.

NUSKU

Bicolor, blend S4L

Nesmith 1928-1930

Brief. S. Congo, pink flushed, a lustrous pinkish buff at center; F. flushed magenta with blue tints below beard, the conspicuous haft heavily reticulated ochraceous tawny; 3 ft.

Details. Long branched and a long flower; S. arching; F. drooping; beard conspicuous, orange.

Remarks. First registered as Marden.

OPAL DAWN

Self, blend M-S4L

Sturt. 1933-1934

Brief. Chamois flushed pinkish cinnamon with honey yellow reflections below the orange beard; 30 in.

Details. S. domed; F. flaring to drooping; haft reticulations maroon.

Remarks. A darker Zaharoon—satiny. H. M. 1933.

OSPREY

(mesopotamica x Oriflamme) x self

Self B3L

Berry 1927

Brief. Low and well-branched; glistening light chicory blue with white haft conspicuously reticulated yellow; 40 in.

Details. S. domed; F. flaring; beard conspicuous, white, orange tipt.

Remarks. H. M. 1927 Redlands Show.

PACIFIC

(Souvenir de Mme. Gaudichau x Lady Foster)

Self B1L

Essig 1929

Brief. Large, light lavender violet throughout with faintest maroon reticulations on haft; 42 in.

Details. Flower rather crepey; S. erect, notched; F. drooping, notched; beard projecting, bluish, yellow tipt.

Remarks. Color of San Gabriel; probably hardier in the North.

PALE MOONLIGHT

(Sherbert x Argentina)

Self B1L

Essig 1931

Brief. Well and widely branched: a very light lavender violet throughout; 4 ft.

Details. S. domed; F. flaring; beard projecting, orange.

Remarks. Bronze Medal Boston Show, 1933, for Best Stalk.

PARMA

(Dawn x Shekinah selfed) x (Delight x Sherbert)

Self, blend S4M

Edlmann-Sturt. 1930

Brief. Hortense violet shading to ochraceous tawny at base of S.—; hafts old gold faintly veined cinnamon brown and intensified by the very conspicuous orange chrome beard; 27 in.

Details. S. domed; F. drooping, very satiny.

Remarks.

PARTHENON

Self W1

Connell 1928-1934

Brief. Foliage tinged at base; large; white, the haft heavily reticulated olive to reed yellow; 39 in.

Details. S. arching, filled, notched, creped; F. drooping, smooth, with stiff green mid-rib; beard white, orange tipt; styles narrow and erect; 42 in.

Remarks. Larger than Selene and a warmer white.

PICADOR

(Ember x Bruno)

Bicolor, blend Y9D

Morrison-Sturt. 1928-1930

Brief. Foliage tinged at base; large S. honey yellow shaded cinnamon buff;

F. velvety mineral red to dahlia carmine fading slightly at edge, dark wire edge; 40 in.

Details. S. arched; F. horizontal to flaring; haft broad, flushed mustard yellow, reticulated heavily mineral red; beard, projecting, yellow orange.

PINK JADU

(Aksarben x —)

Plicata, blend M-R8L

Sturt. 1931

Brief. S. flushed and sanded lilac; F. white centered, dotted lilac and veined blackish purple; the whole center of the flower flushed cinnamon buff and intensified by the conspicuous orange tipped beard; 3 ft.

Details. S. domed, ruffled; F. drooping, ruffled.

Remarks.

PINK SATIN

Self RIL

Sass, J. 1930

Brief. Well branched; a long open flower pale amparo purple to pale Hortense violet, the haft sparsely reticulated brick red; styles very over-arching; 40 in.

Details. Fastigiate branching; S. overlapping, revolute; F. drooping to incurved, a bit pinched; beard projecting, orange tipped.

Remarks. A misleading color reproduction brought sharp disappointment to purchasers of an effective pale pink. Imperial Blush is of better form and a bit paler. H. M. 1931.

PLUIE D'OR

Self Y4M

Cayeux 1928

Brief. High but widely branched; empire yellow deepening at haft; beard conspicuous, orange; 3 ft.

Details. Foliage yellow green; S. arching, a bit cockled at times; F. drooping; haft and styles narrow.

Remarks. Color of Gold Imperial but fades lighter and is larger. Excellent garden effect. Dykes Medal, France 1928.

POLAR KING

(Moonlight x —)

Self W1

Donahue 1931-1934

Brief. Large; exceptional substance; white flushed a pale greenish yellow from the center, the haft with widely spaced clear reticulations of olive yellow; beard conspicuous, yellow; 3 ft.

Details. Stalk stout; S. arched, deeply notched; F. drooping; styles broad, the keel yellowed.

Remarks. October bloom for at least two years in Mass. H. M. 1931, A. M. 1932.

PURISSIMA

(Argentina x Conquistador)

Self W1

Mohr-Mit. 1927

Brief. Very pure white, a few purple reticulations on the claw, a few blurred veins on the haft; beard white; 3 ft.

Details. S. cupped, notched; F. rounded, drooping.

Remarks. Bloomed after a temperature of 20 below zero in New England, 1933-1934.

RAE

Self Y4L

Lothrop 1930-1932

Brief. High but very widely branched; ivory yellow deepening to amber yellow at center, the haft inconspicuously flecked maroon; beard conspicuous, orange; 3 ft.

Details. S. arched; F. flaring; the amber yellow reticulations on the haft stop at end of beard; styles amber yellow, over-arching.

Remarks. R. M., Redlands Show, 1930.

RAMESES

Bicolor, blend S9L

Sass, H. P. 1929

Brief. S. Deep olive buff to avellaneous; F. deeply flushed argyle purple, the conspicuous haft strontian yellow; beard also conspicuous, orange; 40 in.

Details. Widely branched; S. arching, a bit floppy; F. drooping; styles, broad, over-arching.

Remarks. H. M. 1931; Dykes Medal 1930.

RED DOMINION

(Dominion x Nancy Orne) x Dominion

Bicolor M-R9D

Ayres 1928-1931

Brief. S. petunia violet; F. velvety dahlia purple fading to pansy violet, the conspicuous haft closely veined a rich Morocco red; 30 in.

Details. Foliage slender; widely branched; not fragrant; S. erect to arching; F. flaring; beard projecting, yellow-orange; styles narrow, erect, with wire edge.

Remarks. Late flowering in Mass. H. M. 1931.

RED FLARE

Bicolor, blend R9D

Milliken 1932

Brief. S. vinaceous; F. velvety brilliant Bordeaux red, the conspicuous strontian yellow haft heavily reticulated Morocco red; beard conspicuous, orange; 42 in.

Details. Widely branched, below center; flower open; S. arching; F. drooping to straight hanging; styles with lilac keel.

Remarks. H. M. 1931.

RED ROBE

Bicolor R9D

Nichols 1930

Brief. S. Mathews purple; F. velvety dahlia purple to violet carmine, the conspicuous white haft heavily reticulated Morocco red; beard conspicuous, yellow; 33 in.

Details. Short branched; S. arching; F. flaring to drooping, notched; styles flushed brown.

Remarks. H. M. 1932.

ROB ROY

Bicolor S7M

Kirkland 1928-1931

Brief. Short but widely branched; S. testaceous flushed Chinese violet, wire edge; F. very velvety burnt lake flushed dahlia carmine, claw and haft conspicuous citron yellow, the haft closely reticulated mahogany; beard orange; 42 in.

Details. S. erect to arching; F. flaring; styles over-arching.

Remarks. Very rich effect.

ROSE ASH

(Impressario x Bruno)

Self, blend S7L

Morrison-Sturt. 1930

Brief. Large; deep vinaceous lavender deepening below beard; 32 in.

Details. Long and widely branched; S. over lapping; F. drooping.

ROSE DOMINION

(Sherbert x Cardinal)

Bicolor S7M

Connell 1931

Brief. S. a warm magenta; F. velvety dahlia carmine fading at edge to magenta; haft conspicuous, cream, reticulated morocco red; 30 in.

Details. S. with tips adpressed; F. horizontal, convex; beard sparse, projecting, white.

Remarks. A slow grower of distinctive coloring. H. M. 1932.

ROYAL BEAUTY

Bicolor B7D

McKee 1931

Brief. S. Bradley's violet; F. velvety mulberry purple, the haft closely reticulated Hays russet, the conspicuous beard bluish, yellow tipt; 39 in.

Details. Fastigiate branching; S. arching, ruffled; F. drooping, waved; styles erect.

Remarks. Type Souvenir de Mme. Gaudichau—richer. H. M. 1931; A. M. 1932.

SAN DIEGO

(Souv. de Mme. Gaudichau x El Capitan)

Bicolor B7M

Mohr-Mit. 1928-1929

Brief. Large; Bradleys to dauphins violet, the conspicuously light haft widely reticulated madder brown; 4 ft.

Details. Rather short branches; S. erect to arching, revolute; F. drooping, satiny; beard bluish, orange tipt; styles over arching; crest toothed.

Remarks. H. M. 1931.

SELENE

Self W1

Connell 1928-1930

Brief. Foliage tinged at base; large, white, the falls flushed at beard with the naphthalene yellow of the haft; an oblong flower; 39 in.

Details. S. arching, creped, notched, ruffled; F. straight-hanging, occasionally pinched beard projecting, white, yellow tipt.

Remarks. H. M. 1932.

SENIORITA

Bicolor, blend S3L

Mohr-Mit. 1928

Brief. Widely branched; S. center cream buff fading to ivory and flushed the very pale lilac of the falls; F. with a deeper flush below beard of Hays lilac; 3 ft.

Details. S. arching; F. flaring to drooping, pinched; beard projecting, yellow, orange tipt; styles very over-arching, color of S.

Remarks. Color suggestive of the old Dalmarius.

SENSATION

Self B1M

Cayeux 1925

Brief. High branched; light dull bluish lavender, the white haft conspicuous; 39 in.

Details. S. arching, a bit toother, smooth; F. flaring with drooping tips; beard projecting, white, yellow tipt; styles erect.

Remarks. C. M., N. H. F. 1924-1926.

SHINING WATERS

[Caterina x Marian Mohr) x California Blue] x (Uncle Remus x Moa)

Self E-B1L

Essig-Milliken 1932

Brief. Well and widely blanched; large, pale to wistaria violet, the inconspicuous haft finely reticulated olive buff to russet; 4 ft.

Details. S. arching, smooth; F. flaring to drooping, satiny; beard coarse, white, yellow tipt; styles over-arching.

Remarks. Early flowering in California.

SIERRA BLUE

Self B1D

Essig-Milliken 1930

Brief. Very well branched; large, wistaria violet, the inconspicuous haft clay color; 4 ft.

Details. S. conic; F. flaring, a bit ruffled; beard, projecting, bluish, yellow tipt.

Remarks. Deeper and more of a self than Sensation.

SITKA

(Oriflamme x Conquistador) x Shasta

Self W1

Essig 1931

Brief. Large, the S. bluish in contrast to the creamy F. and blurred greenish yellow reticulations of the haft; exceptional substance; 42 in.

Details. Very fragrant; S. open, revolute, toothed; F. flaring to drooping, almost velvety; beard white, orange tip; styles short, over-arching.

Remarks. A bit whiter in effect than Wambliska.

SONATA

(Shekinah x Lent A. Williamson)

Bicolor, blend S6L

Williamson 1928-1929

Brief. S. cream buff; F. lustrous, chamois flushed pale mauve, the conspicuous haft citron yellow at edge, the beard very orange; 3 ft.

Details. S. arching, toothed, frilled; F. flaring to drooping, waved; flower not large.

Remarks. Color of Nepenthe.

SUNLIGHT

(Sarabande x Shekinah seedling)

Self Y4L

Sturt. 1927-1929

Brief. Widely branched below center; naphthalene yellow deepening to Pinard yellow at center, of flower (center of F. lighter) the orange beard, thick and broad, pointed at end; 39 in.

Details. S. domed; F. drooping with flaring tips; haft broad, conspicuous, reticulations very faint; styles over-arching.

Remarks. H. M. Boston Show 1928.

SWEET ALIBI

(Mirasol x Purissima)

Self Y4L

White, C. G.-Milliken 1933

Brief. Well-branched; massicot yellow flushed amber yellow through center; 3 ft.

Details. S. arched, notched, frilled; F. flaring, convex; haft finely reticulated citron yellow to rufous at center; beard orange.

Remarks. H. M. 1932. An even purer self than Yellow Moon.

TALISMAN

Bicolor, blend S6M

Murrell 1930

Brief. Well but fastigiate branching; S. flushed amber yellow; F. flushed pale rose purple, the color deepening at the tips of the segments; 30 in.

Details. S. arching, creped; F. drooping, notched; haft narrow; beard projecting, yellow-orange; styles flushed, narrow.

Remarks. Color often streaky and uneven. C. M., R. H. S. 1930.

THISTLEDOWN

(—x San Francisco)

Plicata W2L

Sturt. 1930-1932

Brief. High but widely branched; a full bloom, very faintly flushed lavender violet; 39 in.

Details. S. with tips adpressed; F. drooping, ruffled, convex; beard projecting, white, yellow-orange tip; styles erect.

Remarks. Effect a tinted white.

TOMMY TUCKER

Self M-Y4M

Nesmith 1930-1931

Brief. Widely branched; an almost apricot yellow fading to palest baryta yellow in the center of the fall; beard conspicuous, orange; styles projecting, striking; 3 ft.

Details. S. domed; F. flaring.

Remarks. Excellent garden effect.

VALOR

(Ambassadeur x Rubyd)

Bicolor R3D

Nichols 1931-1932

Brief. S. dauphin violet; F. velvety madder violet, the broad haft heavily reticulated Morocco red, the conspicuous brown specked beard, orange; 3 ft.

Details. Branching rather short and fastigiate; S. domed, a bit frilled and revolute; F. drooping, convex; styles broad, over-arching.

Remarks. Richer than Van Cleve. H. M. 1932.

VAN CLEVE

Bicolor B1D

Van Name 1926-1928

Brief. S. pleroma violet, wire edge; F. velvety dark madder violet, wire edge; haft white; 3 ft.

Details. S. overlapping; F. flaring with drooping tips; beard projecting, bluish, yellow-orange tipt.

Remarks. H. M. New Haven 1926.

VENUS DE MILO

Kashmir White x (Loute x mesopotamica)

Self W1

Ayres 1931

Brief. Short but well-branched, below center; a large white with inconspicuous pale lemon yellow reticulations on the haft and an orange tipt beard; 40 in.

Details. S. arching, rather flat, a bit creped; F. straight-hanging, convex, oblong.

Remarks. H. M. 1932.

WAMBLISKA

Self W1

Sass, J. 1930

Brief. High branched; S. tinted bluish and very frilled; F. with inconspicuous broken reticulations of deep olive buff to olive yellow; keel of styles violet tinted; 42 in.

Details. S. with prune purple reticulations on claw; F. flaring to drooping; beard projecting, white, yellow-orange tipt.

Remarks. In cool weather almost a pale blue. H. M. 1931.

WEDGEWOOD

Self B1M

Dykes 1923

Brief. High branched; a smooth Bradley's violet throughout, the beard orange and brown specked; 33 in.

Details. S. cupped, revolute; F. drooping to straight-hanging, notched; styles, erect.

Remarks. A most effective garden plant.

W. R. DYKES

Self Y4M

Dykes 1926

Brief. Large, long flower, baryta to $\frac{1}{2}$ tone maize yellow with conspicuous orange beard; 3 ft.

Details. Branching below center but fastigiate; S. erect to arching, ruffled, toothed, revolute; F. straight-hanging, a bit pinched, almost cockled in texture; styles narrow, erect.

Remarks. Flower often marred by dark flecks.

ZAHAROON

Self S4L

Dykes 1927

Brief. Flushed pale lilac vinaceous on a cream buff ground, the haft empire yellow with heavy russet reticulations; beard orange; 40 in.

Details. S. arching, revolute; F. flaring to drooping; styles over-arching.

Remarks. It fades badly in hot weather; charming color as it opens. Silver G. H. Medal, R. H. S. 1927.

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“SERVANT OF THE RAINBOW”

ETHEL ANSON S. PECKHAM

■ Usually writers begin their remarks on irises with reference to the name, to the legends or to the history of the plant, so it will not be out of place if I recount some of the things I have discovered during a three-year research into the origin of the Fleur de Lys and its connection with the iris.

As a result of this work I am now convinced that this symbol is one of those relating to immortality or eternity and, while I cannot go into detail of the *proofs* in so short an article, I *can* prove what I am going to say and intend to publish the proofs at a future date.

There are numerous theories about the origin of the Fleur de Lys symbol and it is possible that more than one has its roots reaching far back to fact, as is the case in relation to all symbols that are extremely ancient. Confusion results from origins that are earlier than actual recorded history being embroidered with new legends by each succeeding user of the symbol so as to fit it to the exigencies of the times. This, naturally, forces the investigator to take certain principles connected with the symbol as guides and, where these are retained and crop up in old religions, beliefs, legends, superstitions or history as used *with* the symbol, he grasps the essential part of the pattern, adding it to what he has accumulated from other sources. Thus the finished theory rises before him as the lost masterpiece of a great painter comes slowly forward under the hands of the expert restorer when he carefully removes layers of dirt and paint.

The iris is a plant perfectly fitted by its construction for use as a badge or emblem in connection with any religious or political purpose. The parabolic method of “getting over to an audience” the especial desire of a government or church is still in use where the people to be enlightened are considered of low intelligence or small education. It was resorted to almost entirely in old days and its only alternative then was a free use of the lash or the sword. The iris, being made all in threes and with a sword-shaped leaf was an ideal plant for comparison. People often wonder about the “superstition of three” and why this recurring authoritative symbol is three-parted but that is a simple matter. It represents

religion, the state, the people; heaven, earth, man and so on through the ages. Faith, hope and loyalty (to the government) translated later by some into charity because the people *had* to be made to give.

Among the stories about the Fleur de Lys we have been told that someone said that instead of the Lilies of France really being lilies, they were irises and that the insignia was taken from *Iris pseudacorus*, the wild yellow iris of Europe which grows in such abundance along the river Lys in northern France. That the blue background of this banner beset with golden "lilies" was taken from the very blue sky of that region is another explanation, but the people who quote all this do not know who first said it, nor can they give any proof. However, I possess an ancient book, few copies of which exist, in which there is an erudite dissertation to prove that the Fleur de Lys is an *iris* and the author, being an expert antiquarian and a numismatist, was able to prove his point, partly through reference to ancient coins and partly through ancient objects excavated during his time and which he identified. He exploded many of the religious legends which are still being bandied about by writers and he did it in a scholarly way.

Starting with the clues given me by this man, I have come upon many exciting and thrilling things and my research path has led me, via religion associated with governmental authority, from French history back through early Gaul in Roman times to Greek, Egyptian, Persian (with the allied Indian beliefs) to Serpent Worship. This I consider the source of the symbol: Serpent Worship.

It is well known that in the thirteenth century (1272) the city of Florence had the iris as its official flower and that the gold coins issued at that time of such superb workmanship and called "Florins" had the Fleur de Lys in one of its most elaborate phases on the reverse.

Clovis, reported to be the first Christian king of France, was by many people supposed to be the first to carry the Fleur de Lys insignia. He is said to have received it at the hands of St. Remi, bishop of what is now Rheims, after a great battle where Clovis had conquered the Roman forces and literally possessed himself of his own country. It was the final defeat of the Romans in Gaul. Church legends say St. Remi baptized the king on the battlefield adding charmingly picturesque details of angels bringing him from

Heaven the banner or shield with new device! We do know his wife had long been a Christian but I very much doubt that Clovis became one because he was most certainly buried with all the paraphernalia of pagan religion as witness the objects found in his tomb. They show that he was probably buried with the same ceremonies as were used in Greco-Egyptian times. It has always been a convenient method of priests of all religions thus to arrange for changes in governments and customs of peoples.

It seems fairly certain that Clovis adopted the symbol of authority carried by the Roman commander. The Roman Curule Aediles used this three-shaped symbol to show their authority. In most cases the Proconsul for Gaul was a Curule Aedile as Gaul was an important part of the Republic or Empire and to be a Curule Aedile was almost the highest position to be obtained. Indeed, it was the second highest in all Rome. These men were important because the grain crop was in their control (they were responsible for it and on it the army moved) that and the tribute of animals. After conquering a country the first thing the Romans did was to fix tribute of grain and animals. I have found that the symbol of authority of greatest importance is that connected with the economic condition of the country studied, the most necessary plant, etc. So the same symbol, always carrying with it the same background of tradition of authority will be used but the plant will vary according to the country and times.

The temple of Ceres, the goddess of the crops, was under the care of these Aediles and this goddess was prominent among Roman deities long before they imported Greek divinities. In Rome Ceres and Hope (Spes) were closely allied, as why should they not be? The three-leaved symbol was known as a "sprout" of grain just beginning to grow (the resurrection of life) and often depicted outheld in their hands. On coins intended for paying the army we find Hope giving this sprout to three soldiers of the legions about to start on an expedition to regain Gaul and you may notice one of the men making the same symbol with his fingers, pointing one to the sky and the other two to the ground. Here the symbol is used as a promise of reward for somebody even should they lose their lives and I cannot help thinking that it here shows its relation to the various religions better than in any other place in which we encounter it.

We stand, then, in Rome at the cross-roads in our search, and



COINS SHOWING (LEFT) THE CURULE AEDILES AND (RIGHT) HOPE PRESENTING THE "SPROUT" TO WARRIORS.

can look in all directions, through Gaul and the middle ages to present day church festivals and popular superstitions; "up country" towards Roman and Etruscan origins; towards Greece, Egypt and the Far East, and last, and by far not the least, south towards Africa.

The medieval story of Seth at the gate of Heaven being given the three-leaved symbol of immortality taken from the Tree of Life as a promise that although he could not enter at that time he should eventually enter into eternal life has its parallel in all the ceremonies and legends connected with life whether of plants or humans. A picture in an early book shows this symbol as almost identical with some of those on Roman coins. On the coins of Marcus Antonius as Triumvir for Egypt the crocodile (Egypt) is shown in chains fastened to a palm tree which is divided into three parts in this same manner. In early Sicilian coins reapers are depicted always cutting *three* ears in a sheaf and on some coins wings are on the sides of the sheaf making it look like the staff of authority as we know it in the caduceus of Hermes. If you will glance at the Fleur de Lys you will see it could easily be a sheaf, tied below the middle. On a gem Florus is seen holding a spray that looks like iris and in the other hand the sickle of exact pattern



COINS (LEFT) OF MARCUS ANTONIUS AS TRIUMVIR OF EGYPT AND (RIGHT) SICILIAN REAPER CUTTING THREE EARS IN SHEAF.

used by the Romans. This is shaped something like the English bill-hook used today and is in three curved parts like the ensiform leaves of such irises as *I. aphylla*.

Taking the country road we encounter Numa Pompilius, a religious, wise and peaceful person, consulting a country oracle. Whenever the people became obstreperous he asked for time to consult his oracle and after the first excitement had blown over he returned with good advice and in this way "kept his country out of war." While he got advice from a "nymph," his *power* was supposed to have been acquired from a shield (a round buckler) which fell from heaven. The significant part of the story of Numa is the round shield sent from the gods. Here is a suggestion of the later shield or banner of Clovis. The Romans used round bucklers with a boss in the centre. Nowadays we realize that dates in very early "history" are flexible and that personages in history stand out. There may have been long spaces of unimportant history between the different items of what has been passed down to us by word of mouth making the earliest bits of what seem to be fact recede to a time far earlier than we ordinarily think of them as having taken place. It is more than likely that the shape of the shields of the Romans and the Greeks was handed down along

with early religious tradition. Continuing up the country road and taking a peep at the Etruscan cinerary urns we note they are made in the form of huts with a wide-eaved roof and along the ridge are set at intervals and in pairs, horns. We wonder why, and file this for future use.

Now, let us go back to Rome and betake ourselves to the market-place for vegetables and country produce where stands the great temple of Ceres. Here we note many of the same things going on we see in our own country today. Notices on a bulletin board, namely fastened up on the temple, notices of prices of the vegetables, meetings of the farmers, of officials, of festivals, of instruction upon growing crops, notices of a dole of grain to be given out to worthy citizens at a time of famine. A dole to be given to those who could show a badge or token that entitled them to the specified amount the state, as represented by the Curule Aediles, had decided to give that year. What were these corn tokens like? They were round with a boss in the middle whereas those that were a sort of annual pass to certain seats in the theatre were of entirely different shapes. In fact these grain tokens were almost exact representations of a buckler!

Going about our business in ancient Rome, coins showing on reverse two Curule Aediles flanked by tubs each containing three ears of grain arranged like the Fleur de Lys with centre one erect and the side ears bending down in a curve, might be exchanged by us for any household commodity. Or, perhaps be given in offering at a temple and, should we decide to visit the great temple of the Thundering Jove, before we pass beneath its portals we might glance up and see above us, carved in high relief, the head of a bull with outspread horns and garlanded for death, some knives to despatch him, a torch to light his pyre, and ewer to hold the wine and a round dish with a raised centre to catch his blood. We at once see the close resemblance between this dish and the Roman shield. Looking to right and left on the capitols of the magnificently ornate Corinthian columns we see acanthus leaves, radiating into torch-like terminals which end again in two horn-like, spreading ornaments, while between them is the exact counterpart of a Fleur de Lys without the tie-band across the lower part! Part of this temple stands today and I have seen this signpost of the crossroads for I ask you to compare church brass or silver communion services throughout the Christian world with this dish and ewer.

There is little in Roman times to connect the Fleur de Lys symbol with iris. This period is a good illustration of religion with its old paraphernalia being made subservient to the uses of the state and the adoption of the divine right of authority by the emperors with the obligatory sacrifice to them is an example. The thundering Jupiter who would bring trouble upon the land if the people did not behave themselves and who needed to be placated was all important at one period and in the implements used for the sacrifices to him we easily see a close resemblance to everything used, even including the necessary animal (bull or ox, often and generally black) to the things depicted as in ceremonial use in earlier religions and to the sacrificial black bull of present day Serpent Worship. Surprising as it may be, Serpent Worship is still being practised in some places in Africa today in the identical manner of the earliest times.

Again looking at the bull's head and the garland of death we start upon our journey towards the east taking with us our three-leaved symbol and the round dish or shield and not forgetting the Etruscan horns on roof ridge. Looking about us in Greco-Egyptian times we find the sacrificial animals garlanded with special flowers to honor particular dieties. We know that these plants or flowers might vary according to what was obtainable though they would often retain the name of the plant originally thought most necessary to please the god. This happens today when pussy-willows are called "palms" and used in some Irish country churches at Easter time and did also forty years ago in the north of England when pussy-willow "palms" were always considered a part of a correct Easter decoration. The principal ceremonies in conjunction with fertility festivals represent the descent into the ground of the plants to live there through the darkness and cold of winter, returning again to life in springtime. In Greece and Egypt the Orpheus and Eurydice legend the story of the going and returning of Persephone and the worship of Osiris are what interest us for they are closely affiliated with the ceremonies of Serpent Worship and also with those of the festivals of Ceres and Demeter, the Greek Ceres. The iris was used in these festivals in Egypt and its use probably became submerged in later times under that of laurel and other plants easier to obtain at several times of the year. Perhaps it is easier to realize that there was a definite use of iris at funerals if we remember that Arabs carried iris to plant on graves and it is known to be a very old custom, so much so that the distribution of some

varieties has been attributed to it. The custom is not obsolete, either, as white iris is still known as "graveyard iris" in Louisiana and Texas. Receiving some from the latter state I was electrified to find it was the true *I. albicans*!

However, now we have reached Greece and Egypt we can make the acquaintance of Iris, one of the messengers of the gods. She represents the rainbow, that emblem of promise of the gods. Rain having come to give us crops the rainbow shows us it will stop before there is too much, likely to ruin them. The rainbow was like a bridge between Heaven and earth and so it is easy to see how it could bring a message. This is entirely analogous with Serpent Worship for the Great Python is the rainbow, he sends the good and beneficent rain, it is he that is responsible for all fertility. He shows in the bend of his lithe presentiment in the sky his promise of good things to come. One does not deal with this Great Python directly, one does it through the head man or high priest, and going back very far on this line, the discovery is made that the head man or chief has his tent marked with a pole or staff upon which is tied a pair of horns in which combination we can quickly recognize the likeness of our Fleur de Lys emblem. For here is the centre erect piece (the head of the spear or staff) and the horns, pointing to the ground, make the two other curving pieces while the tying material makes the crossband like that of the French "lily." A present day custom in Egypt is to, tie a pair of horns on the sides of date palms and the natives will tell you it is to keep off evil spirits and that it makes the trees bear more and better fruit! Horns are very efficacious in keeping off the evil-eye and the position of the hand where the thumb, second and third fingers are held down while the first and little fingers make a pair of horns is familiar to most as a sure preventative measure during such danger!

The connection between iris and the rainbow has more ramifications than the usual explanation that the plant was so named because of its many colors. We are so rapt in the *colors* of the rainbow that we forget the significance of its *message* and it is Iris as one of the messengers of the gods that concerns us. She is the promise of better things, the fender off of evil. In Korea the iris is known as "Servant of the Rainbow" which title covers really all the relations of the Fleur de Lys with Iris and iris with immortality or fertility. We saw the Thundering Jove (Giove Tonante) whose principal symbol is generally the sheaf of lightning bolts, and we noted our Fleur de Lys upon his temple and we know that sacrifices

were made to him to assuage his anger so he would not send a tempest with terrific rain and lightning to destroy everything and if we were to go now to some parts of Hungary we would find iris planted along the ridges of the roofs "*to keep off lightning!*" In Normandy, also iris is planted on the roofs, always on the ridge and, although the peasants have no knowledge of the reason for it except that "it is the custom," it probably is a survival from the old religion. In Spain, too, iris is tied on the balconies during a summer church festival "*to keep off lightning*" and in many lands it is still the custom to tie a bush at the highest point when building a house and the roof ridge is set. The Spanish festival corresponds with the time of an old Roman crop festival, St. John's eve, when in folk lore of many countries fairies are abroad and bad spirits are about. If you look at one side of an original Florin you will see the Fleur de Lys and on the other is St. John the Baptist! I noticed in Quebec that on St. John's Day all the houses were decorated with bushes tied on the fronts or on balconies or above the front door. And so the messenger of the gods still is busy though sometimes a proxy plant does the work.

I think the horns on the roofs of the Etruscan huts were put there to fend off the evil spirits and, as they were most certainly pairs of ox or bull horns it seems as if there must be a derivation from the same burial and propitiating customs. The fact that they are placed on the ridge exactly as the iris plants is interesting. The iris plants serve a utilitarian purpose in that a thatched roof leaks at the join and plants will help to close the gaps. The horns might act as lightning rods! Perhaps the first Etruscan to so decorate his house had that in mind and amused himself by "stuffing" curious neighbors, telling them he was propitiating the gods. Or maybe the iris plants are put up there by the Hungarians ostensibly to stop the leaks but in their heart of hearts they know they are sending a message, a sort of "white flag," to a violent old diety! It is a significant thing that in Hungary the planting of the crops in springtime is accompanied with ceremonies closely allied to those of Serpent Worship and that at the same time the grain is planted in the fields a few kernels are put in the eaves of the roof and if *they* grow the crops are sure to be a success!

So we perceive how closely interwoven are all these beliefs and parabolic ceremonies and how wide and long we must journey to grasp the full meaning of a row of iris plants growing on a house

whether it be in Japan, Hungary or France and while there appear to be wide gaps in my reasoning I only ask you to remember that it is always the most important deity of a religion who gives the greatest gift. It would be too much to try here to go into detail but should suffice to say that Jupiter (Zeus), Indra, the Great Python and even the wicked witches of folklore whom the heroes have to circumvent and who pursue him with tempest and lightning had always the greatest gift in their keeping—immortality.

And I hope that through my removing a little paint here and there, brightening that spot and so on, you will be able for yourselves to get a picture of the Fleur de Lys which, while you are looking upon it, will slowly dissolve into an iris and thinking of all its meaning of power, faith and persistence get some small part of that message that is meant for each one of us.

Sterlington, N. Y.

A REGIONAL REPORT—1934

J. MARION SHULL

■ Without knowing the precise metes and bounds of a Regional Vice-President's duties toward the A. I. S., I nevertheless gather that from each is expected something in the way of a report for the year. Unfortunately, the region centering about Washington, D. C., suffered rather severely in the matter of Iris interests during the year just past. First came the loss of the late Homer C. Skeels, whose exceptional collection of the Morrison productions in addition to many others enabled him always to make a major contribution to any Iris show within reach. He was not only able to exhibit many varieties but these were well grown and his displays were invariably of high quality. This year both the local Iris show of the Takoma Horticultural Society, Takoma Park, Md., and that of the National Capital Dahlia and Iris Society, of Washington, D. C., missed his usual contribution. The N. C. D. & I. S. was further handicapped by the fact that almost at the last moment word came that Mr. Sheets of Treholme Gardens, College Park, Md., would not be able to display his hundreds of varieties as heretofore.

Mr. Sheets has presumably the largest collection in the East, south of New York, and possibly the largest without such exception, plus an unbounded enthusiasm for the Iris, but he was already a very busy member of the Professional Staff of the U. S. Department of Agriculture and as if this in itself were not a sufficiently man-sized job, when the drouth situation became acute he was chosen to administer Federal drouth relief, a burden of responsibility that left no loose ends of time even to think about his Iris hobby. Under these circumstances the Iris show staggered a bit but pulled itself together and put on a really creditable display.

A few new seedlings were entered by local breeders. One of these breeders, Dr. Chas. W. Ayars of Takoma Park, Md., presented a splendid stalk of his Ethel Guill, a very large blend of the type of My Maryland (Sheets), which would surely merit an H. M. unless because of too great similarity to the latter. Dr. Ayars plans to grow it side by side with My Maryland for a closer comparison. He also displayed an ochraceous yellow that seemed quite promising.

Mr. Simmons again exhibited his Midnight Skies, a fine dark blue-purple, not so intense quite as Meldoric (Ayres) or Purple Glory (Piper) but a flower of fine form.

None of the newest western yellows appeared in the show but the finest single stalk of the exhibition happened to be a well-grown stem of Pluie d'Or (Cay.), about 3 feet tall, 10 buds, and with 3 splendid flowers open. As shown here I have seen no yellow yet to excel it, notwithstanding that I have never succeeded in growing it that well in my own garden. Last year a similarly fine stalk of Dune Sprite held this premier position.

How many Iris shows were held in this region this year I do not know for my own freedom of movement was somewhat hampered during the blooming period. I did, however, make several special visits to the Sheets collection at College Park, where I found a splendid display of bloom, but it so happened that many of the most interesting of the new varieties represented there had been completely reset the year before or had been depleted in the course of commercial operations so that in many cases bloom was obviously not typical. Many could not be fairly rated for this reason, but the comment in my notebook made at the time, may prove of some interest.

It may be more honest than polite to confess to some of these notes, since I have already acknowledged myself incapable of rating

anything at 100 and have never seen or produced anything in which some added grace or perfection would not have been welcome. I have friends to whom every fine Iris is for the moment the "finest Iris in the world," but not being so constituted myself, I find it hard to bestow unstinted praise in the manner of these enthusiasts but, to satisfy my own ego, let us say, must do the unkind thing of mentioning the deficiencies also. It is a thankless task, of course, and admittedly the simon-pure enthusiast is the happier individual and I envy him, but this just didn't happen to be my heritage. Anyhow, if judgments differ there is always "regional behavior" to blame it on!

Here, then, are some of the heretical comments with which my notebook of last May confronts me in the middle of August:

ALLURE (Murr.)—washed-out.

ALTA CALIFORNIA (M-M)—light, but nice; yellow standards. Falls not quite so good, too large in relation to standards.

ANDREW JACKSON (Kirk.)—long, relatively narrow falls; not pleasingly proportioned. Throat color not pleasing.

BLUE MONARCH (Sass)—somewhat lacking in substance.

BLUE TORCH (Sheets)—fades from dark to light on the falls, always an unsatisfactory color scheme. Flowers tend to bunch.

GIANT KING (Sass)—while taller and more vigorous, the flower is by no means as fine as in Iris King. Substance only medium and there is much too much white at the throat for best appearance, and the flowers are too bunched.

KING JUBA (Sass)—fine large bright variegata. Chief fault too much bunching of flowers at top of stem.

LARGO (Ashley)—soft color but rather too weak and washed-out. (Perhaps due to Washington climate in 1934.)

MELDORIC (Ayres)—while very dark, is probably difficult to grow and bloom well. Falls tend to roll up instead of spreading flat. Perhaps all these very dark things should be grown only at the North or in partial shade of buildings. The dark surfaces absorb so much heat that in extreme sunny weather they shrivel in a few hours.

NANOOK (Ayres)—fine opaque white with warmth at throat; well branched; falls could be broader to advantage.

NENE (Cay.)—large but rather loosely built.

NINGAL (Ayres)—color delicate, hardly positive enough. Falls rather narrow. Hardly outstanding as indicated by the one good

stalk in evidence at College Park, but may not have been sufficiently well represented.

PURPLE GLORY (Piper)—a little more red-purple than Blue Velvet (Loomis), and a slightly better flower for richness and depth of color. Does not fade at margin. Not quite as deep as Meldoric but better carriage of its wider falls. Beard not quite as rich as in Meldoric.

RAMESES (Sasst)—seen for the first time in quantity and a bit disappointing. Perhaps Dykes Medal publicity tends to make one expect too much. Substance not good; form not exceptionally good. General color as in Midgard and Mary Geddes. (Have we not perhaps overdone this type for the moment?) Larger but not as fine form as Midgard. Personally I consider Williamson's Opaline superior.

ROSAKURA (Williamson)—fine red velvety falls with lighter margin.

ROSE DOMINION (Conn.)—is a lovely rose color, of the usual flaring Dominion type. One stalk seen is short and inadequate to judge of its garden value.

SACHEM (Loomis)—falls relatively narrow and flowers too much bunched at the top. Standards not as yellow as in Beau Sabreur (Williamson) and the latter much the superior flower. Tiger-Tiger (Wareham) much the same color but greatly richer and finer finish. Sachem about intermediate between Tiger-Tiger and Rob Roy (Kirk.) but Rob Roy the better stalk.

THEODOLINDA (Ayres)—large but a bit loose in its make-up.

TIGER-TIGER (Wareham)—an exceedingly rich flower in its color, generally red to yellow-brown. A much more highly finished flower than Sachem.

Among the Sheets seedlings are several that may prove fine for garden mass, notably a white, 6B, and a yellow, 11B. The latter is not particularly pleasing as to form but is a beautiful color and apparently free-flowering. He has a larger flowered yellow, 1B, with a very rich beard, but this plant bunches its flowers rather too closely. His 11A, obviously of Loudoun parentage, possesses considerable novelty value. The nearly white falls are yellow at throat with a parted area of fine purple frecking forking outward from each side of the beard, in this respect quite unlike anything I have ever seen.

I regret that my Iris wanderings could not extend farther

afield this year but several gardens in this locality reported that they had nothing worth going over critically, so there is nothing left but a brief comment on my own garden which, in spite of the bad winter, with the destruction of flower buds on some new arrivals, gave a rather better than usual account of itself, due largely to the presence in some quantity of the lighter colors represented by Moon Magic, Phosphor, Dune Sprite, Waterfall, and my yellow-white bicolor, Sylvia Lent. Masses of these served as an efficient foil for the prevailingly darker colors of former years. Helping also were such lovely things as Morrison's Sophronia, Williamson's Opaline, and a smaller clump of Miss Sturtevant's Ambrosia which I like so well that I hope to see it develop into a much larger planting.

I realize how inadequately this report covers the region it is supposed to represent since no mention is included of the various centers of Iris interest in Virginia. I hope that members from some of these points may supplement this with individual reports direct to the Society, and that I may find better opportunity to go farther afield another year.

MIDDLE ATLANTIC RECOMMENDS VARIETIES

■ As to the usefulness to private growers generally, of national and regional symposiums or synopses of votes for so-called best varieties of tall-bearded Irises, we have encountered two differing negative opinions.

1. IRISES BEST FOR WHAT.

“Best for What?” objected one member whose question about regional lists of recommended varieties voiced a thought we had heard before,—as if a really popular vote may not reflect choices for particular and differing *uses* of varieties by the voters, whether for small gardens, for larger landscape effects, for table decoration, for exhibition, etc.

A plan was devised whereby simultaneously each member could vote both affirmatively *for* varieties by him preferred for *his particular uses*, and also inferentially yet quite positively *against* other and different varieties by him deemed inferior for the same uses. This plan took form as follows: to send in one enclosure to each regional member, both *first*, a printed *ballot* form upon which to vote for up to 100 varieties of his selection for his uses; and also,

secondly, another and different printed form or *check-list* upon which to check the name of each variety thus by the voter declared to have been by him sufficiently observed *growing in this region*, to enable him to give it any and all merited consideration as a candidate for his vote on the other form first referred to above.

Any variety so checked by any one certain voter, on the *second* form, but *not in fact voted for* by the same voter, on the *first* form, would obviously be a variety deemed by this voter inferior to every other variety in the same color group for which he did vote on the *first* form after considering fully the relative merits of each such variety.

In December, the decision was made to conduct such a popular vote by members in Pennsylvania, New Jersey, and Delaware. Both forms were printed and with a covering letter were mailed simultaneously to all our members, each of whom was then invited to attend a regional conference in Philadelphia on January 20th to consider the result of the voting.

The printed ballot (*first* form) itself instructed the members to vote their varietal preferences by the same color groups used by the New England judges in their list at pages 33-35 of Bulletin No. 46, so that later horizontal comparisons could be made. It was directed that votes be given only to such varieties as the member had sufficiently observed actually growing in Region No. 3, and which in his opinion the conference should recommend as the best, or among the best, for the members in these states. Voters were instructed to ignore extraneous factors such as origin, date of introduction, current prices, performance in other regions, etc., and to vote only on the basis of inherent varietal quality including growing and blooming habits in this region,—the finest older favorites and the finest recent introductions, all alike, and each only on its relative merits against all others in its class, to be given impartial consideration insofar as such varieties had been in fact adequately observed in this region by the voters. The ballot form itself suggested that our regional breeders might elect to refrain from voting for their own originations, and at the same time pointed out that no known rule of good taste required them so to refrain.

On the 4-page accompanying check-list, i. e., the second form above referred to, were printed the names of 426 different varieties. On this check-list, each voter was instructed to check the names as before explained. The check-list included some old favorites which

at least formerly were the best to be had in their colors; some other varieties which in their turn won the favor of discerning judges; still other varieties that were rated high by various accredited judges in the 1932-33 ratings; and still other regional and other seedlings which have not yet appeared in any rating list.

Each member was requested to fill out and to check his two forms and to return them together to the sender.

2. AS TO COMMERCIAL INFLUENCE.

In Region No. 3, and quite possibly in some other regions, the commercial breeders and growers are in number so few that their personal votes can not be of substantial numerical importance in any popular ballot. It is therefore obvious that by not consulting them as to the *method* of conducting such a ballot, it was easy to obtain a result in which direct commercial influences was a truly negligible factor.

3. COMMENT ON THE RETURNS.

In this our first popular regional ballot, 42 voters (21 men and 21 women), 25 per cent of the current total membership of the three states, participated with the results shown in the following analysis of the ballots and the check-lists. The voters by States were: Pennsylvania, 21—the majority of them from the trading areas of Harrisburg, Philadelphia, and Pittsburgh; New Jersey, 20—most of them from north of Trenton; Delaware, 1.

Not one variety among the 109 that won the most votes, obtained a single vote by any commercial grower or breeder through his voting for his own originations. Only four commercial growers voted. Of them, three, I believe, have not distributed printed price lists in recent years and do not have large stocks of other breeder's novelties; the fourth did not vote for any of his own originations, and his printed price-list includes, I believe, only varieties of his own raising.

The value of the information on the *second* (check-list) forms when considered in conjunction with the votes on the *first* (ballot) forms, seems unquestionable as pointing to voters' preferences *for and against* particular varieties according to the uses intended for them. For example: Of 17 voters who declared that they thoroughly know Pocahontas and its performance in this region, *only 4 voted for it!*—that is, only 23% of its intimates or familiars, so to speak, voted for it. On the contrary: of 21 members who reported thor-

ough acquaintance with Los Angeles and its habits here, *19 voted for it!*—that is, full 90% of its intimates voted for it. And of all voters who declared full knowledge of Wambliska, every one,—full 100%, voted for it—as was also the case with Shasta, Rheingauperlle, Clara Noyes, Gay Hussar and Dorothy Deitz, which had 13, 11, 16, 8, 11 and 8 votes respectively.

When the letters accompanying the ballots were studied, it was found that a considerable number of the members disapproved of the color groups on the ballots, because they were unlike the generally accepted color groups. For this reason, supported by the unanimous vote of the conference on January 20th, with 4 of our 5 accredited judges present with other members, the result of the voting is shown here by color groups agreeable to the scheme of the color chart at the top of page 6 of the Alphabetical Check List. Wherever disagreement between the color symbols in the latter and the opinion of our regional judges at the conference, was found to exist in relation to a particular variety, it has been grouped in this tabulation according to the opinion of our judges.

It is confidently believed that a much greater percentage of our membership would have voted, had it not been for the difficulty they encountered in attempting to list their varietal preferences in the color groups that appeared on the ballots. If your region should plan to conduct a similar popular ballot, it is recommended that on the check-lists to your members, varietal names be printed by the same color groups that appear on your accompanying ballots. On our check-lists, unfortunately, the names were printed only in *alphabetical* order, which tended to minimize participation in the voting.

Something of the background of our voters can be seen in the following table compiled from the data received upon the check-lists and ballots:—

No. of Voters	Who are thoroughly acquainted with the performance in this region of varieties to the number of
4	more than 175
7	100 to 175
15	50 to 99
10	35 to 49
6	less than 35
<hr/>	
Total 42	Average 79

While 75% of our members did not vote, we are without reason to believe that their votes would have changed the result in any substantial way except quantitatively. Certain it seems that the old favorites for which many of the 25% voted, similarly would have received the votes of many of the other 75% had they voted; and more members who are familiar with numerous novelties are believed to be found among the 25% than among the 75%.

Of the 428 varietal names printed on our check-lists, a total of 113 were not checked by even one of the voters. That is to say, it seems that each of these 113 varieties is either without distribution in this region, or it has not been seen growing in this region by any of the voters, or has not been here observed sufficiently to enable even one voter to declare that he thoroughly knows its performance here. This applies, for example, to such as Aubade, Capt. Courageous, Colossus, Crown Prince, Easter Morn, Ethel Peckham, Fedelma, Hollywood, Imperial Blush, Irma Pollock, Lady Paramount, Legend, Marquita, Modoc, Motif, Mrs. Herbert Hoover, Natividad, Nurmahal, Rose Petal, Shirvan, Sierra Blue, Theodolinda, Thuratus, Winneshiek, etc.

Similarly, each of the following varieties was checked by only one voter:—Akbar, Al-lu-wee, Alta California, Ashtoreth, Aurex, Cryso-ro, Dogrose, Dune Sprite, Eloise Lapham, Ethelwyn Dubuar, Hermene, Jeb Stuart, Mary Senni, Minister Fernand David, Naron-da, Noweta, Paulette, Phebus Cayeux, Rhadi, Ronda, Rosemont, Sirius Bunyard, Spring Maid, Starsong, and Tid-bit.

Only two voters reported that they have thoroughly observed the regional growing and blooming habits of Blackamoor, Douglas, El Tovar, Eppo, Fairylea, Fulgore Cayeux, Joycette, Gilead, Kermanshah, Mme. Serouge, Petrucchio, Pink Jadu, Ragusa, Rusty Gold, Santa Fe, Ultra and Violet Crown.

Only three voters checked Alameda, Ambera, Blue Banner, Boadicea, Cantabile, Challenger Sass, Debussy, Esterel, Evolution, Floridor, Heloise, Hernani, Hypnos, Mareschal Ney, Mme. Abel Chatenay, Morning Glory, Penn Treaty, Quivera, Rasakura, Rose Dominion, Rose Valley, Waconda.

In view of the method taken to obtain a result not dictated by commercial influence, perhaps it may be permitted here to commend particularly to dealers selling these varieties so little known here, that if their sales to Region No. 3 are fewer in proportion to their sales in other regions, then we think they may profitably put some effective advertising and selling effort against this market. For votes

were in fact cast both for definitely superseded, and even for blacklisted varieties. We mention this only to emphasize our belief that when members more generally have personal experience in blooming the mod-
 erns which are definitely better than obsolete ones, their enjoyment of their collections and their appre-
 ciation of the work of their Society will be greatly intensified.

TABULATION OF THE VOTES

No.	WHITES			Total		Variety	Breeder	RATINGS	
	Total Votes	Total Who Know It Thoroughly	Percentage Voting For It	Total Voters Who Know It Thoroughly But <i>Did Not</i> Vote For It				'22	'27G '32 '33
1	18	28	64%	10		Taj Mahal (Sturt., '21)	.....	83	81 71
2	14	23	61%	9		La Neige (Verd., '12)	.....	82	78 75
3	14	17	82%	3		Micheline Charraire (Den., '24)	.....	....	87 83
4	13	13	100%	0		Wambliska (J. Sass, '30)	.....	....	.... 85 86
5	12	16	75%	4		Purissima (Mohr-Mit., '27)	.....	....	95 84 84
6	11	*		*		Fairy (Ken., '05)	.....	80	78 66
7	11	*		*		Moonlight (Dykes, '23)	.....	....	84 79
8	11	11	100%	0		Shasta (Mohr-Mit., '27)	.....	....	83 86
9	11	15	73%	4		White & Gold (Nic., '28)	.....	....	.... 76
10	9	14	64%	5		Chartier (Hall, '25)	.....	....	89 81
11	9	*		*		White Knight (Saunders, '16)	.....	83	80 66
12	8	*		*		Kashmir White (Foster, '13)	.....	84	81 82

*above—unreported on check-lists.

7 Votes—White Queen. 5 Votes—Ambrosia, Lenz-Schnee, Venus de Milo. 4 Votes—Athene, Zada.
 Each of 20 other Whites received from 1 to 3 votes.

PLICATAS

13	22	27	81%	5	True Charm (Sturt., '20)	....	84	81	...
14	19	31	61%	12	Anna Farr (Farr, '13)	....	84	77	70
15	19	21	90%	2	Los Angeles (Mohr-Mit., '27)	....	....	89	92
16	13	18	72%	5	San Franciaso (Mohr-Mit., '27)	....	....	88	87
17	10	17	59%	7	True Delight (Sturt., '24)	....	....	85	82

7 Votes—Jeanne d'Arc. 4 Votes—Anndelia, Ma Mie, Midwest, Pocahontas, Princess Osra, Sacramento, Mme. Chereau.

Each of 17 other Plicatas received from 1 to 3 votes.

AMOENAS

18	27	32	84%	5	Mildred Presby (Farr, '23)	....	87	85	....
19	27	39	69%	12	Rhein Nixe (G & K, '10)	....	84	83	79
20	12	23	52%	11	Dalila (Den., '14)	....	80	79	....
21	8	8	100%	0	Dorothy Dietz (Wmsn., '29)	....	....	84	87

4 Votes—Anne Leslie, Rheintochter.

Each of 15 other Amoenas received from 1 to 3 votes.

BLUE LAVENDERS TO BLUE PURPLES

22	33	41	80%	8	Princess Beatrice (Barr, —)	....	95	90	84	....
23	32	40	79%	8	Souv. de Mme. Gaudichau (Mil., '14)	....	93	88	85	....
24	28	38	73%	10	Ballerine (Vilm., '20)	....	94	89	82	....
25	21	38	55%	17	Queen Caterina (Sturt., '18)	....	90	88	82	....
26	20	24	83%	4	Mary Barnett (Cumb., '26)	....	....	90	84	....
27	17	30	56%	13	Souv. de Loetitia Michaud (Mil., '14)	....	....	90	87	....
28	15	31	48%	16	B. Y. Morrison (Sturt., '18)	....	87	80	78	....
29	15	29	52%	14	Crusader (Foster, '13)	....	87	85	82	....
30	15	*		*	Mother of Pearl (Sturt., '17)	....	....	84	79	....
31	14	20	70%	6	Germaine Perthuis (Mil., '24)	....	....	71	86	....
32	13	22	59%	9	Duke of Bedford (Bliss, '22)	....	....	87	80	....

Blue Lavenders to Blue Purples					Total Voters Who Know It Thoroughly But Did Not Vote For It	
No.	Total Votes	Total Voters Who Know It Thoroughly	Percentage Voting For It	Variety	Breeder	RATINGS
						'22 '27G '32 '33
33	13	17	76%	Sir Michael (Yeld, '25)	.....	.... 90 85
34	12	20	60%	Corrida (Mil., '14)	.....	.... 83 84 83
35	12	22	55%	Santa Barbara (Mohr-Mit., '25)	.....	.... 89 83
36	12	28	43%	Sweet Lavender (Bliss, '19)	.....	.... 85 87 80
37	11	15	73%	Baldwin (H. P. Sass, '27)	.....	.... 84 84 88
38	11	19	58%	Wedgwood (Dykes, '23)	.....	.... 87 80
39	9	26	35%	Juniata (Farr, '09)	.....	.... 81 81 74
40	9	*		Prospero (Yeld, '20)	.....	.... 84 75
41	9	15	60%	Sensation (Cay., '25)	.....	.... 85 85
42	8	19	42%	Brandywine (Farr, '20)	.....	.... 91 82 80
43	8	*		Lord of June (Yeld, '11)	.....	.... 91 78 72
44	8	20	40%	Majestic (Bliss, '23)	.....	.... 87 76
45	8	17	47%	Tom Tit (Bliss, '19)	.....	.... 79 80 78

*above---Unreported on the Check-lists.

7 Votes—Ann Page, El Capitan, Tropic Seas, 6 Votes—Blue Velvet, Gleam, Mlle. Schwartz. 5 Votes—Dalmatica, Moa, Swazi, Van Cleve. 4 Votes—Black Wings, Blue Jay, Duke of York, Katharine McFarland, Yves Lassailly.

PINK LAVENDERS TO RED PURPLES

46	26	38	68%	Morning Splendor (Shull, '23)	.....	.... 91 91
47	25	32	78%	Dream (Sturt., '18)	.....	.... 85 84 78
48	24	36	67%	Seminole (Farr, '20)	.....	.... 83 83 83
49	21	30	70%	Susan Bliss (Bliss, '22)	.....	.... 86 81
50	20	29	69%	Frieda Mohr (Mohr-Mit., '26)	.....	.... 85 86
51	17	31	55%	Georgia (Farr, '20)	.....	.... 89 83 71
52	16	16	100%	Rheingauperl (G & K, '24)	.....	.... 87 82
53	13	24	54%	Aphrodite (Dykes, '22)	.....	.... 88 76

54	13	15	87%	2	Dauntless (Con., '29)	....	89	90
55	13	15	87%	2	Indian Chief (Ayres, '27)	....	84	88
56	13	19	68%	6	Labor (Cay., '2)	....	87	82
57	12	32	37%	20	Her Majesty (Perry, '03)	73	74	53
58	11	16	69%	5	Pioneer (Bliss, '24)	....	90	80
59	11	13	85%	2	Trostringer (H. P. Sass, '26)	....	80	....
60	10	15	67%	5	Caroline E. Stringer (J. Sass, '24)	....	83	77
61	9	12	75%	3	Cinnabar (Wmsn., '29)	....	....	85
62	9	10	90%	1	Pink Satin (J. Sass, '30)	....	....	79
63	8	17	47%	9	Folkwang (G & K, '24)	....	84	77
64	8	15	53%	7	Julia Marlowe (Shull, '24)	....	85	79
65	8	21	38%	13	Tenebrae (Bliss, '22)	....	88	80

7 Votes—Cecil Minturn, George J. Tribolet. 6 Votes—Archeveque, Mrs. Marion Cran. 5 Votes—Elizabeth Egelberg, Imperator,

Mme. Cecil Bouseant, Mount Royal, Queen of May, Rob't. W. Wallace, Thais, Wild Rose. 4 Votes—Aurora, Caprice, Edouard

Michel, Esplendido, Gobelin Red, Lohengrin, Marquissette, Mrs. Alan Gray, Peerless, Red Dominion, Serenade.

BLEND

66	29	41	71%	12	Ambassadeur (Vilm., '20)	94	91	83	....
67	26	30	87%	4	Bruno (Bliss, '22)	....	90	83	....
68	25	31	81%	6	Migard (H. P. Sass, '26)	....	....	87	85
69	24	28	86%	4	Dolly Madison (Wmsn., '27)	....	91	87	....
70	23	38	60%	15	Asia (Yeld, '20)	92	88	80	....
71	22	41	54%	19	Lent A. Williamson (Wmsn., '19)	96	88	75	....
72	22	38	57%	16	Quaker Lady (Farr, '09)	84	75	76	....
73	21	37	57%	16	Isoline (Vilm., '04)	86	84	73	....
74	20	26	77%	6	Cardinal (Bliss, '19)	....	90	86	....
75	16	17	94%	1	Vesper Gold (Wmsn., '27)	....	89	80	....
76	13	*		*	Afterglow (Sturt., '13)	86	82	74	....
77	13	21	62%	8	Apache (Farr, '26)	....	87	82	....
78	13	21	62%	8	Mrs. Valerie West (Bliss, '25)	....	91	88	89

No.	Blends			Percentage Voting For It	Total Voters Who Know It Thoroughly But <i>Did Not</i> Vote For It	Breeder	RATINGS		
	Total Who Know It Thoroughly	Total Votes	Total Who Know It Thoroughly				'22	'27G	'32
79	15	13	15	87%	2	Rameses (H. P. Sass, '29)	....	....	87
80	*	12	*		*	Alcazar (Vilm., '10)	89	87	78
81	17	12	17	70%	5	King Tut (H. P. Sass, '26)	....	85	84
82	23	12	23	52%	11	Medrano (Vilm., '20)	85	87	75
83	19	10	19	53%	9	Candlelight (Andrews, '26)	....	91	78
84	16	10	16	62%	6	Euphony (H. P. Sass, '29)	....	....	84
85	16	10	16	62%	6	Grace Sturtevant (Bliss, '26)	....	87	85
86	29	10	29	34%	19	Magnifica (Vilm., '20)	91	85	77
87	*	10	*		*	Opera (Vilm., '16)	80	83	75
88	12	9	12	75%	3	Allure (Murrell, '27)	....	....	79
89	15	9	15	60%	6	King Karl (J. Sass, '25)	....	83	82
90	*	9	*		*	Ochracea (Den., '19)	79	82	79
91	22	9	22	41%	13	Steepway (Scott, '22)	....	82	75
92	8	8	8	100%	0	Clara Noyes (H. P. Sass, '30)	....	....	85
93	17	8	17	47%	0	Coppersmith (Shull, '26)	....	....	83
94	12	8	12	67%	4	Valencia (Mohr-Mit., '26)	....	86	79

*above—Unreported on the Check-List.

7 *Votes*—Cameliard, Cameo, Glowing Embers, Mary Gibson, Mme. Durrand, Romola, Elsinore. 6 *Votes*—Depute Nomblot, King Midas, Prosper Laugier. 5 *Votes*—Beau Sabreur, Jane Williamson, Mme. Cheri, Montour, Omaha. 4 *Votes*—Jubilee, Loua, Mount Penn, Persia, Reverie, Rhea, Tuscan Gold.

YELLOW

95	21	31	67%	10	Gold Imperial (Sturt. '24)	....	87	79	....
96	21	23	91%	2	Pluie D'Or (Cay., '28)	....	....	79	87
97	14	*		*	Shekinah (Sturt., '18)	88	84	78	....

98	11	*		*	Coronation (Moore, '27)	...	86	87
99	11	17	65%	6	Yellow Moon (Sturt., '23)	...	74	...
100	10	22	46%	12	Aliquippa (Hall, '24)	...	73	...
101	9	26	35%	17	Amber (Dykes, '24)	...	70	...
102	9	*		*	Sherwin Wright (Koh., '15)	76	73	...

*above—Unreported on the Check-Lists.

7 Votes—Chasseur, Desert Gold, Helios Cayeux, Primrose. 4 Votes—Aurea, W. R. Dykes.
Each of 24 other Yellows received from 1 to 3 votes.

YELLOW BICOLORS

103	22	24	92%	2	Citronella (Bliss, '22)	...	71	...
104	16	19	84%	3	Flammenschwert (G & K, '20)	...	79	...
105	16	33	48%	17	Iris King (G & K, '10)	79	73	...
106	11	11	100%	0	Gay Hussar (Wmsn., '29)	...	80	...
107	8	16	50%	8	Nebraska (H. P. Sass, '28)	...	82	...

6 Votes—Argynnis, Lodestar, Rialgar. 4 Votes—Henri Riviere, Loreley.

Each of 23 other Yellow Bicolors received from 1 to 3 votes.

INTERMEDIATES

108	10	16	63%	6	Nymph (H. P. Sass, '27)	...	85	83
109	8	*		*	Kochii (Kerner, 1887)	78	80	...

*above—Unreported on the Check-Lists.

7 Votes—Florentina. 5 Votes—Zua.

Each of 17 other Intermediates received from 1 to 3 votes.

THE PHILADELPHIA CONFERENCE

A.

For future tabulations of national and regional ratings or Votes, similar to those reported on pages 51 to 53 of BULLETIN No. 47, and on pages 33 to 35 of BULLETIN No. 46, the Philadelphia Conference consisting of both accredited judges and other regional members, unanimously approved these recommendations:—

1. That the White Selfs, the Plicatas, the White Bicolors (Amoenas) be not merged under one color group but be listed under their distinctive designations, separately;
2. That the Yellows (other than Blends) be not all merged under one color classification, but that Yellow Selfs and Yellow Bicolors (Variegatas) be listed under their respective designations, separately;
3. That the so-called Near-Whites be not separately so tabulated, but be merged under other color groups, according to their several officially-designated color symbols; and
4. That the other Color-Groups be according to those shown on pages 51 to 53 of BULLETIN No. 47, which admit of easier and more accurate allocations consistent with the scheme of the color chart on page 6 of the Alphabetical Check-List.

B.

Concerning varieties for which a marked liking was expressed by voters in Region No. 3, in part because of individual unfamiliarity by some of those voters, with other varieties that received fewer votes, the conference unanimously voted, *as to this region*, as follows:—

1. That Shasta is preferable to Taj Mahal.
2. That True Delight is generally superior to the variable and often slow-growing yet lovely Anna Farr.
3. That Corrida is generally a better doer than Crusader.
4. That Wedgwood should be preferred over Duke of Bedford.
5. That Lent A. Williamson, for its tendency to fade out, should be subordinated to Alcazar.
6. That King Tut be commended over Isoline on account of her slow growth and shyness. One member reported unusual success with Isoline grown in a bed of ashes.

7. That Coronation (Yellow Self) is far superior to Citronella (Yellow Bicolor).
8. That Yellow Moon, notwithstanding susceptibility to root rot, is superior to the taller Shekinah which is similarly susceptible and also has more variable growing habits and thin substance.

C.

Various judges and other members reported dissatisfaction with, or a lessening liking for, other varieties for reasons as follows:—

Mother of Pearl, Candlelight, Sir Michael, Cameliard and Jacqueline Guillot:—stems reported as variable between erectness and snakiness.

Asia:—stem instability often requires staking.

San Francisco:—extreme susceptibility to root rot reported even in cases of alleged fine drainage and in the absence of excess of lime or other fertilizer.

Moonlight:—extremely cup-shaped standards; susceptible to rot.

Brandywine:—variable growth reported from sections other than Southern New Jersey.

Grace Sturtevant and Allure:—slow growing habits.

Mary Barnett:—reported color fading.

Aphrodite and Ochracea:—colors displeasing to various members.

Trostringer and Magnifica:—form or carriage of falls displeases various members.

Steepway:—considered inferior to Hypnos.

Tenebrae:—color effect indifferent or ordinary.

SPECIES NOTES

Iris kumaonensis Wallich

■ For the person who has access to books the pleasures of gardening can be variously increased sometimes with less labor and pain than in actual operation, and for the person who is concerned with species, books often are the only sources of information or hopes of sight of many of the kinds that have not gotten beyond the stage of being botanist's specimens.

This year there flowered for the first time one clump among iris raised from seed collected in India. Turning to Dykes "The Genus Iris" it was immediately apparent that one plant was *Iris kumaonensis* of the *Pseudoregelia* Section. Unfortunately none of the few flowers set seed so there is no opportunity to compare the seed pod with his description. In other ways the plant agreed excellently, with its short foliage at flowering time, almost stemless bloom, solitary flower, its long perianth tube and clear mauve purple flowers with irregular blotches on the falls.

Our plants have grown slowly but apparently happily in a sunny field with light sandy soil but have not spread rapidly.

Turning to books for such an identification also brings one to cross references and to notes and pictures of other allied species. Perhaps no opportunity will ever present itself for seed of any of the species related to *I. kumaonensis* so pictures from books are included here with grateful acknowledgment to each publisher.

From Curtis Botanical Magazine (Vol. XLIII) Tab. 6957 is copied the plate of *Iris Kingiana* Baker which Dykes made a synonym of *I. kumaonensis*. The description by Dr. J. G. Baker read in part: "It comes about midway between *I. pumila* and *I. tectorum* and forms a connecting link between the sub-genera *Pogoniris* and *Evansia*, in the former of which the claw of the outer segment is furnished with a beard, and in the latter with a more or less lacinated crest. Our drawing was made from a plant that flowered in the Kew collection at the end of May this present year." (1887.)

Dykes pointed out his differences of opinion about the rudimentary crest and beard and gives other reasons for creating a sub-genus, *Pseudoregelia* to take the place of Baker's *Pseudevansia*.



C. C. Thomas

IRIS KUMAONENSIS
(Natural Size)



IRIS KINGIANA FROM CURTIS BOTANICAL MAGAZINE



IRIS HOOKERIANA FROM CURTIS BOTANICAL MAGAZINE



IRIS SIKKIMENSIS

From W. R. Dykes' *Genus Iris*. (Reprinted by permission of the University of Chicago Press.)

From Curtis Botanical Magazine also, Volume XLIX (1893) Tab. 7276 comes the figure of *Iris Hookeriana* which differs conspicuously from *I. kumaonensis* in having a taller stem and two flowers to the stem.

So far I have found no illustration of *Iris goniocarpa* Baker that can be copied and no description that gives a very vivid idea of the flower.

And for *Iris sikkimensis* Dykes, the only illustration is that appearing in Dykes' "The Genus Iris" of which only a portion is reproduced here with acknowledgment to Cambridge University Press and The University of Chicago Press. To one unfamiliar with the Iris, this seems an unusual plant with its widely opened and horizontally flaring standards.

One wishes that some way might be found in which seed of all these unseen species might be had, even if years are needed for their germination.

Iris dichotoma Pallas

Many years have elapsed since the first flowering of the Vesper Iris in my garden but only this season have I managed to get flowers to the photographer for its portrait. The first seeds came to me from Peiping, sent by a Chinese doctor who accompanied me on a visit to the Western tombs and who seemed somewhat amused by my eagerness over this slender plant that bloomed in the grassy meadows thereabouts. The plants from that seed gave only the familiar creamy white flowers variously dotted and blotched with dull lavender, except in one case which was pure white with yellow hafts and no darker reticulations.

Since then other seed has produced the lavender form illustrated but no particular mention has been made of the fact that this lavender varies somewhat in hue and the falls vary somewhat in the amount of their markings. Sometime perhaps we shall have selected strains of this iris to add interest to the summer borders.

Notes have already been given in the BULLETIN as to its usefulness in various parts of the country and possibly all members know that it occupies a separate division among all irises. The roots are thick and fleshy, springing from an irregular somewhat knotty crown that sends up each year a strong stalk, with wide leaves arranged somewhat like those of the blackberry lily (*Belemcanda chinensis*) and ending in a widely branching stalk. Each

tip carries a sheath from which many flowers are produced. The flowers, natural size in our picture, are not large and open only in the afternoon, here usually about two-thirty, and close after sundown. Whether or not it is common elsewhere, it has been noticed that here they are visited by wasps as well as bees and flies. Thanks to these many insect visitors, the flowering is usually followed by a good crop of seed. This, if planted early will produce small plants flowering late the first autumn, but the best effects come the second and following years.

Iris dichotoma

Plants were set as young seedlings, in a semi-stiff micaceous loam, in Fairfax County, Va., in back of low growing foundation planting of shrubs, having a southeastern exposure. Well drained. They lived and increased in size of plant and beauty of flower each season for three perhaps four years, and then suddenly passed away. Their passing however occurred in the terrible drouth year of 1930 when water in the suburbs was at a premium and could not be used for the garden.

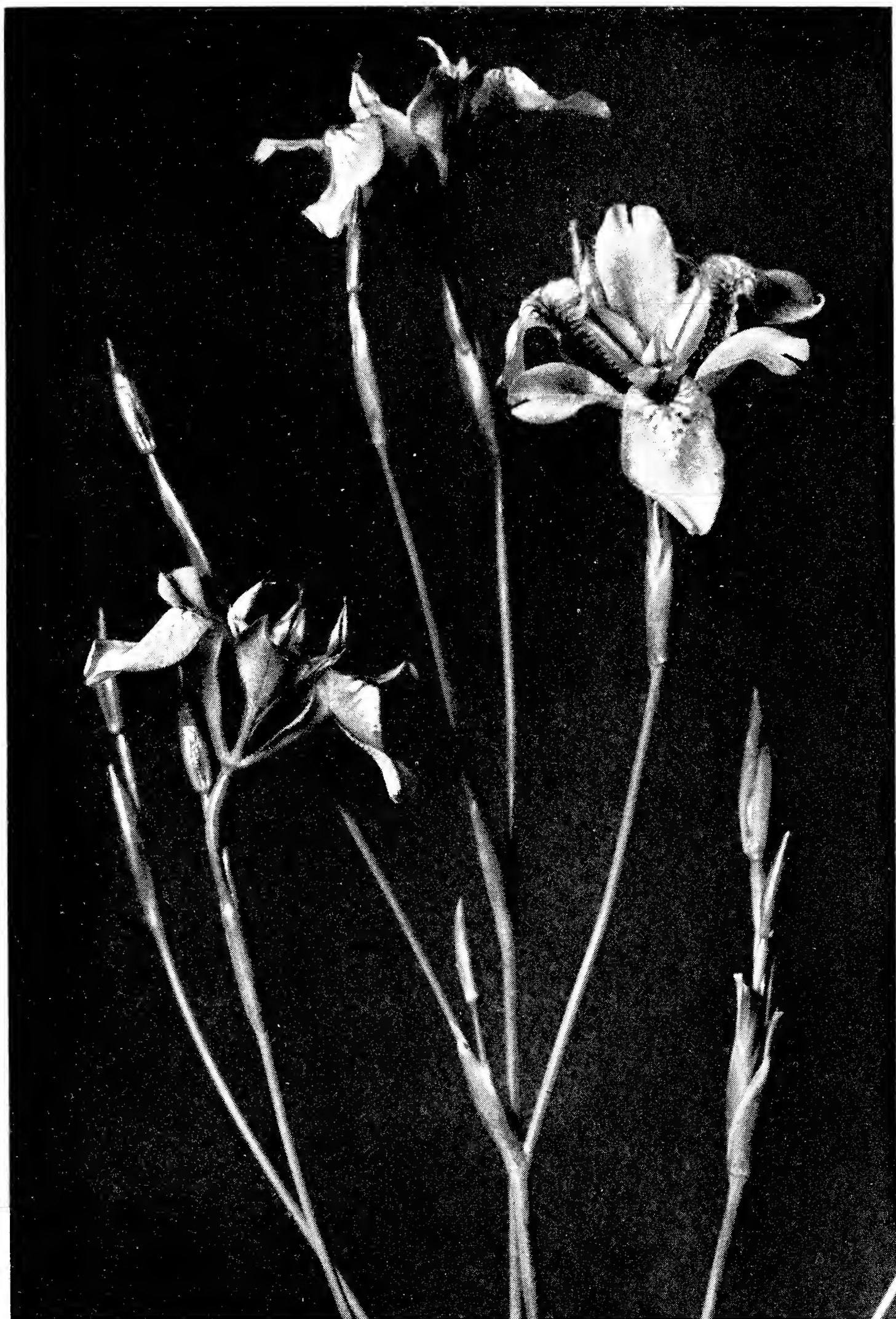
The cooling effect of the surrounding shrubs seemed to be an aid in their well being until that drouth year. As they developed in leafage, so they increased in beauty of flower, the plants a veritable fountain of bloom. The mature heads of bloom showed so many buds, that though each flower lasts less than a day, each day for nearly a week, the fountain endured and was showy enough to attract attention of visitors.

CHAS. E. F. GERSDORFF.

Forms of dichotoma

Iris dichotoma, native of Eastern Asia, is a decidedly interesting iris species. It blooms at a time when most iris are long through, season generally August and early September. The flowers are born on stems in surprising numbers. Individual bloom lasts but a day. Its habit of flowering in the afternoon explains the application of the name Vesper Iris, which it truly is.

Because of its novel features, I decided to experiment with seedlings and watch for variants in colorings. This year, out of several hundred seedlings of a cross of a form from Manchuria with a form from China, I obtained three rather marked variations from the common coloring. The type I have in abundance



Lilian A. Guernsey

IRIS DICHOTOMATA

[77]

is a lavender self. In these new seedlings I found a very pale form, practically a self white. Another marked form was a very intensely colored type. Two specimens of this coloring occurred. And thirdly, a form with a snow-white signal patch (that area where the beard is on the bearded iris) with ordinary coloring. Many seedlings had a slight marking of white but this form was very noticeable because of its extra large size rendering it notable at once.

I have selfed these three forms and have seed pods on them practically ripe. It will be highly interesting to see just what they yield. Perhaps color and size improvements will bring this iris into more gardens. The study of wildlings and exotics is an engaging pastime. Perhaps others have had some experiences with this iris that would be interesting to readers.

ROBERT SCHREINER, Minnesota.

Iris bucharica Foster

Of all the tall growing iris of the Juno Section, possibly the easiest to manage is the species with a name that harks back to Bokhara and all that that suggests. Early in the spring it pushes up its sheaf of corn-like leaves that grow up along a stem which reaches fully eighteen inches in well-established plants. In all the upper axils are fat buds that open into charming flowers with glistening white style branches and falls covered with clear lemon yellow. The topmost flower opens first but the others develop before that has faded.

Most persons seeing it for the first time doubt if it can be an iris, so different is the general aspect of the plant from the familiar bearded iris.

Here it has flourished in the garden soil to which has been added liberal supplies of leaf soil and sharp sand to lighten the strong clay. Increase is only moderate so that division is not often needed. When it is necessary the plant should be lifted carefully as the tops are dying down, and the offsets should be removed with care not to injure the large fleshy roots that characterize the members of this section. These are fairly permanent and produce from their sides and tips the annual feeding roots that nourish each year's growth. The bulbs should be reset at once to prevent unnecessary drying out.



Geo. C. Stephenson

IRIS BUCHARICA

Iris ruthenica Ker-Gawler.

For the present issue there is only time to record that one photograph comes through the kindness of Mr. Carl Starker, and



Geo. C. Stephenson

IRIS RUTHENICA

to say that it is a delight to know that somewhere in the United States there are plants that bloom. My own gave only leaves until they died after a move that suited them not at all.

THE FAMILY TREE

■ Referring to difficult crosses again, I succeeded in making several others to the extent of obtaining seed, only in several instances losing the seedlings through an untimely late freeze, those of Soledad \times Kochi, and in case of Kochi by Blue Boy, having nice, but few plump seeds fail to germinate.

Georgia \times Caroline E. Stringer gave but one seedling of value, Spring Beauty, which in a New England garden in 1932 showed considerable improvement in substance and lasting quality over another fine pink on the market.

Out of Cecil Minturn \times Caroline E. Stringer, a numerous progeny of pinks, grays, palest blues and whites were obtained which are purely of garden merit, of the type often referred to as table iris.

Alcazar \times Dusk has given two seedlings of merit, one outstanding and the other though subsequently used in further breeding has since been discarded.

Ramona has proved a potent parent either way, but have no results as yet to report. Chasseur \times Mildred Presby has given one promising seedling so far. Sarabande \times Seminole grew into a number of strong seedlings.

Reciprocal crosses between the following have produced seed that germinate:

Mrs. Cuthbertson and Chasseur

Dusk and Mme. Cheri

Chasseur and Caroline E.

Chasseur and Anne Bullen

Stringer.

Mildred Presby \times Souv. de

Mme. Gaudichau

I obtained but few seed from the above excepting in case of Anne Bullen \times Chasseur, Mme. Cheri \times Dusk, and Dusk \times Mme. Cheri.

Suzanne Autissier \times Souv. de Mme. Gaudichau gave many seedlings which have yet to bloom.

Geo. J. Tribolet \times Santa Barbara and Geo. J. Tribolet \times Dusk, each gave amongst others, one strong growing seedling.

Sachem has yet to set seed for me, but its pollen has been effective on Dusk, Sophie, Deucalion, Ramona, Rose Madder, Golden Heart and Mrs. H. F. Bowles. Dulcimer \times Mme. Cheri gave a number of strong growing seedlings.

Under the above heading, notes by me in the January, 1934, number, leads to others, and though but recently published they were written something like a year previously. Subsequent studies, par-

ticularly of certain of my seedlings mentioned by name, have led to a withdrawal from actual existence of several of them. The reasons therefor were extremely good, but so involved that it does not seem desirable to more than mention by name those which since have become extinct. These were Matuli, Natasha, Shaga-laska, Silver Sheen and Gretel, and mentioned in earlier BULLETINS—Linda, Leocrates, Laodicea and Chenango; with several others being held purely for possible further breeding exploits.

Though I have a penchant for naming quite a few things each year because they please me, I yet may be pardoned this, considered by some an offense, for having actually introduced but a few of them. The named ones have all at some time shown some quality I hoped to perpetuate in better seedlings, and though some have failed me utterly to transmit the quality in mind, I have steadily gained some measure of success with others, and all told considerable pleasure in having before me varieties most pleasing, if not world-beaters.

Regarding my report in the second paragraph of the same paper, I must regretfully add that of all of the “wide” crosses made only the following survive as actual growing seedlings—one Soledad × Magnifica, a few Shekinah × Fritjof and several Kurdistan × Geo. J. Tribolet. The others developed plant weaknesses from which they gradually passed away.

From certain crosses I have obtained large pods fat with plump seeds—yet none of these have ever germinated, even after a period of several years—Ch’nyaun × Tenebrae; White Queen × Impressario; Caroline E. Stringer × Dusk.

One from Shekinah × 27 Avril gave such an insignificant flower and stalk that I almost discarded the others sight unseen.

Two from Chasseur × Mildred Presby gave nice blends, one on the blue side, the other on the red, each with flowers larger than either parent. Wm. Marshall × Margery so far are nothing to rave about. Sarabande × Seminole gave a number of interesting things very pleasing to me, most of them larger than either parent, with better branching, all partaking of the type of coloring of the former, that is showing a lighter edge to the falls, most with flaring falls, a few drooping to straight hanging and these latter mostly small dainty flowered things on thin wiry stems in keeping with the size of the blossoms, and a few with a picotee-tulip-like edging to the standards, flushed not penciled as in plicatas.

C. E. F. GERSDORFF.

BEARDED IRISES AT WISLEY, 1933

*Adapted from the Journal of the Royal Horticultural Society,
Vol. LIX, Part 1, January, 1934*

■ English methods of judging irises, their cultivation and judging over a period of years, seems ideal and it is most unfortunate that we, in America, have not succeeded in following out a similar principle. In 1923 we attempted a Trial Garden for seedlings and new introductions at the Bronx with the idea that, eventually, there would be similar plantings in at least four other climatic zones. We tried vainly in the following years to have plants sent for trial and to have judges act at least three times during each flowering season. Until 1929 the only awards of merit were made to irises thus judged, selections from a pitiful handful of new introductions. At Wisley varieties for trial are selected at the big shows (or sent in by originators from abroad). They are then grown on and judged more than once, annually, as to their future in one of four classes; Awards of Merit, Standard Collection, General Collection, Discards, a 1933 addition. Each year the variety is again placed in its proper category and the average gardener can easily select from what the experts consider of value.

Previous reports have been made in Vols. 53, 55, 56, 57 and 58 so that you must not expect the following abstracts to be at all complete. It is interesting to note that, under English conditions, American varieties differ widely from our valuation.

The varieties are only roughly grouped as to color as again we get a difference between the American and the English classification.

“WHITES”

Standard Collection: Yves Lassailly, A. M.

General Collection: Athene, Milky Way, White Queen, White Star.

Discarded: Antares.

“PLICATAS”

Standard Collection: Jane Austin (Insole).

General Collection: Parisiana.

Discarded: Byron.

“AMOENAS”

General Collection: B. Y. Morrison.

Discarded: Corot.

“LAVENDER TO PURPLE BICOLOR”

Standard Collection: Cydnus, Autocrat, Palemon, Fandango, Rose Marie.

General Collection: Anne Page, Eglamour, Mercurio, Neptune, Salome, Apollo, Cypriana Superba, Maharana, Vashti, Dominion, Hochelaga, Houri, Ibpall, Esplendido.

Discarded: Blue Lagoon, Papillon, Samothrace, Simone Vaissiere, Vanlo, Moa, Oriental, Shalbruz, Sirdar, Tarchon, Brilliant, Fragonard, Harriet Presby, Luciane, Princess, M. Hautefeuille, Peerless.

“PURPLE SELFS”

Standard Collection: No change.

General Collection: Aquarelle, Avalon, Bellorio, Grey Lady, M. Masse, Mother of Pearl, Odoratissima; Arsace, Blue Boy, Venetia, Dr. Chas. H. Mayo, Dog Rose, Elinor Blossom, San Luis Rey.

Discarded: Gargantua, Isabey, Jacqueline Guillot, Pallida Octavius, Pallida Sheldrake, Pluto, Pte. W. A. Logan, M. M., Purple Haze, Salawat, Swatara, Sybilla, Powhatan, Marylise, Perry's Favorite, Rugajo.

“BLENDS”

Standard Collection: Horace Vernet, Allure, Mrs. Valerie West, F. C. C. 1933; Rhodes, A. M. 1933; Gloaming, A. M. 1933; Don Juan, Petrea; Zwannenburg, A. M. 1933; Mary Geddes, A. M. 1933; King Midas.

General Collection: Farandole, Gericault, Marquissette, Olive Murrell, Senorita, Distinction, Albiero, Allies, Caylus, Fire God, Le Correge, Nene, Opera, Rose Madder, Steepway, Greuze, Mme. Chobaut, Ophelia, Sandrine.

Discarded: Dr. Bless, Francheville, Geraldine, Sarabande, Cambuscan, Amanullah, Gernez, M. Boyer, Samos, Gustave Courbet, Le Grand Ferre, Louis David, Wraith.

“VARIEGATA”

Standard Collection: Watteau, Detaille.

General Collection: Gagus, A. M. 1916; Iroquois, Salonique, Paul Baudry, Rosa Bonheur, Thrudwang, Triste.

Discarded: J. F. Millet, Solana.

“YELLOW SELFS”

Standard Collection: Nicolas Poussin, A. M. 1933; Sunbeam, Rayo de Sol, Moonbeam, A. M. 1933.

General Collection: Bastien Le Page, Canadian Gold, Delacroix, Mrs. Neubronner, Phecda, Sherwin Wright, Virginia Moore, Aliquippa, Chasseur, Daffodil, Primrose, Soledad.

Discarded: Aurea, Etta, A. M. 1916; Leutha, Queen Flavia.

ASK ME ANOTHER

■ SUPERPHOSPHATE. A question from Mr. Julius Dornblut of Bellingham, Washington, seems well answered by some experiments made at the Oklahoma Agricultural and Mechanical College by Miss Charlotte Strayer. They merely emphasize the fact that soil conditions are most variable. In the experiment quoted it should be remembered that both Vigoro and Cotton Seed Meal are much more nitrogenous than superphosphate and hence their effect more evident. We are not told what the next year's bloom may or may not have revealed in the three beds.

“*The soil here is extremely alkaline* and the city water has much free lime in it.

“Three beds were prepared—No. 1, Superphosphate; No. 2, Vigoro; No. 3, Cotton Seed Meal. And the result in No. 3, where cotton seed meal was used, was remarkable; the foliage, fine color, strong, sturdy, and nearly two feet high; the flower stalks absolutely straight and eight inches taller than the same varieties grown in either of the other beds; the blooms of wonderful size and substance, huge but not in the least coarse in texture—truly magnificent.

“The next best results were from No. 2 bed where Vigoro was used; the phosphate bed was good, but not comparable to either of the others.

“We were delighted, for the college has been stressing cotton seed meal as a fertilizer in this state for it is both cheap and available.”

Mrs. M. F. Bates writes “one thing I have tried with success might help some one else. It is simply to use two small stones or half bricks to hold the root firmly in the ground when planting a new rhizome. They hold the moisture and also the day's heat through the night which is usually quite cold here in Duluth.”

A question from Mr. Linton of Florida brings up the frequently discussed point “How shall we treat the newly planted novelty?” and, as the bearded iris is reputed as not successful in Florida (with the exception of *Kochi*, *albicans*, and a few others), I am rather at a loss to answer him.

In general the time of planting is most important. We avoid the near approach of a prolonged drouth, of a period of freez-

ing and thawing, of heat and humidity. The plants, in other words, make the best growth (and avoid rot) in a good loam, with moderate moisture and moderate (at least for the south) heat. Frequently the new rhizome is planted actually in a layer of light loam or even sand as a precaution against rot; then the new roots can get nourishment from the good loam (or even a forkful of rich manure) below.

Additional precautions are taken if the rhizome is at all soft or diseased. Dusting with a copper carbonate compound or flour of sulphur are usual recommendations. It is well also to remember that sun-drying is a cure-all.

It is only when we plant at the wrong season that we develop our own pet theories of culture. Some plant in sand or coal ashes for drainage. Some always plant in frames or pots to permit careful shading, watering, or protection from cold.

The plants clearly do not like planting before flowering though English experiments with March planting proved a big increase in growth and bloom the SECOND flowering season thereafter. Like other bulbs they can be planted immediately after blooming UNLESS that precedes a bad drouth in which case planting at the beginning of the fall rains (as in the middle south) is to be preferred. In Florida I would expect to pick the coolest season and try to avoid both excessive heat and moisture. A couple of months of even less should give a well-established plant.

“SALABLE RHIZOMES”

There are always complaints of sorts as to what a customer receives and it is frequently justified perhaps but it is even more frequently a natural and almost unavoidable variation in growth habits.

The size of a rhizome may be typically pencil-like as in *I. cristata* or *pumila* or extremely fat as a nubbin or series of nubbins. Even among the bearded irises there is a marked increase in size as we compare a *variegata*, a *pallida*, or a *mesopotamica* or *cypriana* strain, in fact, Californian grown roots of the latter may be as big as your wrist.

Again season affects the appearance of our purchase. Either in early spring or after flowering when new growth begins with the first rains, the nubbin may be thickly studded with thrifty sprouts. A bit later the single rhizome may show only one sheaf of leaves

(often enclosing the flower bud) and the new sprouts will develop in our own garden instead of in the nursery. One may be suspicious of getting next year's flowers if the new rhizome is double-pronged and none too husky, whereas if it be strong two stalks of bloom are to be expected. The single rhizome with a strong sheaf is perhaps the ideal salable plant and the less alive the feeding roots seem, the better, as you have hit just the season for new growth to start and the shock of moving is just that much less. Incidentally, I always break up a clump of prongs into individuals regardless of their size.

To secure an even stand of ideal salable rhizomes is not easy (even when the customer desires shipment at the right season for the nursery). Both the demand and the supply of any given variety is variable. The big, ready-to-bloom, rhizome is ready at a certain period of its growth. You may find a good proportion of them in an old clump or in a new planting, the source is unimportant.

Aside from these vagaries of a variety or of a growing season there are certain practical points to be considered. It is better for the customer to receive a root at the time he wants it even if it is not in its best condition. (This suggests that buying in your own locality and letting the grower select the date of shipment might be advisable.) If the variety be very rare and expensive the grower is not only assuming a big risk of loss but must propagate intensively which means less matured (and hence smaller) rhizomes. He cannot afford an extended correspondence as to whether you would prefer the immature rhizome or prefer to await its growth in his garden, and the result is you get a "poor" root and pay a big sum. His alternative, not offering for sale until the plants mature in sufficient quantity, usually means no sale and there you are!

Complaints as to condition upon arrival are justifiable. Complaints as to plants not proving true to name when they flower are also good. But think twice before you complain of size of roots and think even a third time if you have tracked a special bargain to its lair. It may be a real bargain but it is more likely to be as false a bargain as one bought in the basement or over the counter.

SOIL CONDITIONS

Siberian, other beardless and bearded are all grown together in my garden, or as I prefer to call it "my weed patch," in soil

that varies from a heavy clay to light loam. No cultivation. Practically no removal of dead foliage. Most of the beds are below level of the grass paths, except on edge of terrace. Must note those nearest or at the terrace edge do not grow or bloom nearly as well as those in the sunken beds.

In the heavier soil the beardless have lower stature and smaller flowers. In the drier loose loam the bearded seem to lack substance, perhaps better characterized as a softness due to lack of moisture. Where moisture conditions are normal the bearded do very well in either soil type. By normal I mean soil that some would term too wet. Where beardless are kept actually wet, growth is most luxurious and bloom better. I realize these could use manure heavily to great advantage.

Preferably I like a soil for Siberian, *ochroleuca*, English bulbous, *pseudacorus* and bearded to be rich in humus, and the richer this may be is none too rich for the variegatas. For Spanish and Dutch types, a loose very well drained soil, lacking humus is best, with some sun shelter for the former, as they are latest to bloom.

I do not use lime. I abhor its use in the iris garden because invariably when present accidentally or otherwise, I lose many of my plants through rot. This of course eliminates from my patch such iris which according to all known sources of information must have lime to flourish.

Iris sintenisii is happily at home in a spot near a wall, which is a little lower than elsewhere along that wall, in soil light and sandy in texture, but subsoil of clay, western exposure. Otherwise it receives the same treatment as the others, commercial fertilizers, bone meal, humus, ammonium sulphate, rotting foliage and well rotted manure.

CHAS. E. F. GERSDORFF.

TID-BITS 36TH

■ COLOR. As quoted from *Science News Letter*. "Prof. Haldane formulated his theory as follows:

"1. In the perception of either color or brightness our vision as a whole is always active; there is no merely objective cause of color or brightness.

"2. In this active perception we can distinguish the coordinated maintenance of color and complementary color, as well as brightness and darkness, in the field of vision.

"If his theory be true, the assumption on which Galileo and Newton founded physics, that 'our sense organs are simply receptive of various kinds of impressions from a surrounding physical world' does not cover the facts. Newton, in his 'Opticks,' had assumed that the color of any light depended solely on its refrangibility, or wavelength. Prof. Haldane showed with experiments that he could make light which, by the law of physics, ought to be yellow, turn blue, white, green, or any other color, merely by changing the whole of its background.

"A small area of a white screen lit by a daylight lamp appeared blue when viewed through a hole in another screen lit by a yellow lamp, and green when the front screen appeared to be white, although actually it was still lit by the red lamp.

"It is necessary for an object to be given the eye's whole attention if its 'true' color is to be determined."

Perhaps we laymen are not so far wrong after all when we label a variety as "blue" or "pink" as "apricot" or "almost red." We are gradually beginning to acknowledge the probable effect of soil and light on the color of a variety. We know that some people are curiously color blind in part. Perhaps hereafter we should not think that all makers of catalogs or originators were merely judging their colors through rose-hued glasses but rather, consider that they had not ignored the background (or foreground) that influenced their seeing quite honestly.

I certainly remember many a seedling that seemed magnificent the first year and a mere also ran the second.

RATINGS. As the 1934 Policy of Awards has not yet been published in a BULLETIN I would assure you all that the suggestions of Mrs. Horton (and of a great many others) have been not only considered but frequently incorporated: viz. Irises are not judged

on first year bloom; ratings are not published unless five or more judges vote; the Dykes Medal is given only the 5th year after introduction.

The suggestion that ratings be marked as Temporary or Permanent seems an unwanted confusion. It was done in one of the early symposiums and we have also tried out the keeping of separate ratings for garden or cut-flower effect. Much as I dislike the whole question of ratings and awards I must confess that many solutions were tried out in the early years of the Society and that, in recent years, the Award Committee has devoted an unconscionable amount of time to a fair consideration and acknowledgment of divers schemes which, in themselves, were often completely contradictory. The difficulty is a practical one; is it possible to judge each year or even within three years 250 new varieties?

“FIRE BLIGHT.” Occasionally and apparently in every garden, a plant yellows and, on investigation, reveals a perfectly sound rhizome but not a single healthy feeding root. Normally we can afford to burn the plant at once (it does not seem to be either infectious or contagious), but Mr. C. G. White sends in the following helpful suggestion.

“A similar something is common in *Oncocyclus* and *Regelias*. The orange growers are using sulphate of zinc and lime for mottled leaf and I tried the same on a few plants. Now the interesting thing is that in digging these diseased clumps (the leaves striped) the roots were surprisingly healthy. I have no proof that zinc is either a remedy or a preventative but an observation of one year makes for an interesting speculation.

“The formula is: 2 parts zinc sulphate; 1 part hydrated lime. About 3 pounds to 200 square feet. It takes several months for results to show.”

NEW JERSEY NOTES, from Mrs. Mechling. “Jersey does do things to iris. I found that out to my cost some twenty years ago. I had stopped in to see Mr. Farr’s irises and fallen in love with Wyomissing (you remember what a dainty thing it was, with delicate pink pencilings). When it bloomed for me it was bleached out and faded, bereft of charm; shade, richer soil—nothing helped so I gave it to a Pennsylvania friend and lo! Wyomissing was its lovely self again.

“What fun I had twenty years ago wheedling irises from the Pennsylvania Dutch farmers’ wives! One farm yard had the path to the pig pen bordered by alternating clumps of golden *ochroleuca* and purple *orientalis sanguinea*, a really regal effect. If “milk fed” fowls cost more, what price “iris-outlook pigs?”

NEW ENGLAND NOTES. Your editor ran about a bit trying to rate varieties this spring and in the running observed a few Massachusetts gardens. Nearest to his “iris home,” the Glen Road Iris Gardens, is that of Mr. Donahue, a riverside garden of rich alluvial soil. There are broad grass paths, arching trees, and, on rising slopes, stone terraces. The garden stretches along the water behind two or three old colonial houses. There are peonies and hemerocallis and many perennials scattered through the iris plantings. It is here that delicate, well-poised beauties grow into lush, coarse giants of no distinction. It is here also that you find real beauties better grown than even at Freeport (my present idea of real growth).

Not far away is Mr. Gage’s garden, a cleanly cultivated backyard, each plant well labeled and allowed to develop into a fine clump. Only treasures are to be found and the poor variety, even a seedling, soon lands in the rubbish heap. From this small area come outstanding varieties—among them Gloriole and Mary Lee Donahue and a still unnamed beauty.

Mr. McKee is at Worcester and his backyard reminded me of that of Mr. Wassenberg in Van Wert as I saw it ten years ago; broad grass paths, a garden feature or two and solid beds of irises. It was a high class small collection, finely grown, and the seedlings to my mind with a bit too strap shaped falls. You remember that my usual comment on a dark variety is “not interested.”

Mrs. Nesmith at Lowell has a collection easily comparable to that of Mrs. Pattison. The old garden rises behind the house and through rose arches you go into the old orchard—now filled with beds of hemerocallis, Louisiana irises, and a long border of perennials where the Globe Thistle towers in early August. I have never seen her “field” but I feel completely at home in her mixed garden plantings and am constantly wandering off to see a new Oriental poppy or yellow day lily instead of rating an iris. Here I saw Gudrun, a big floppy pale thing, and Parthenon, again too big and coarsely whiskered for my taste, Golden Helmet, a strong rich yellow bronze that I want to see it another year,

despite its dark tones. In a way I find this a much better place to judge than Freeport; there is a greater variety and the plants are probably less well-grown and are certainly in smaller clumps. The blooms are, however, in mass and well-branched and budded stalks are characteristic of the variety. I think it is the foliage and increase that is less vigorous. It is also a pleasure to find colonies of wild irises and of favored old varieties to compare to the so-called novelties.

CONCERNING PLICATAS

I feel inadequate to say anything that would be of any particular interest on the subject of plicatas. If I recall it correctly, I spoke, rather mentioned in my letter that I had several rather interesting seedlings in that section. Such is the case, but I took no pictures of these individually, never dreaming that I would later want them. I do, however, recall a few which I will attempt further on to describe, though it may have to be in a limited way.

In the early spring of '32, while away from home, a friend brought to me some publications of one kind and another to while away sadly distressed and lonely hours of anxiety in the evenings. Knowing my great interest in irises—that was the subject. I copied extracts from an article by Mr. Sturtevant in *Societe Nationale d'Horticulture de France*. In looking over these notes I find the following: "Only by pedigree breeding through a number of generations can we hope to secure plicata in first generation." Preceding this statement I should have quoted: "From our records, a plicata \times plicata has but once produced a plicata, whereas———"

Even under the then circumstances, those statements caught my interested attention, because of Mr. Sturtevant's informed authority and certain facts as I knew them. In 1929, I planted seeds of Sherbert, Mme. Chobaut and others that I do not now recall—all chance—however; a few of these germinated but from them I had no bloom until '31 that claimed particular attention.

One of these, a pleasing blended plicata, afterwards registered as Sweet Cicely. This was a first generation and from an unknown cross.

Of those blooming in season of '34, all were first generation except on which was from Sweet Cicely \times Unknown pollen. That

was neither pedigreed breeding nor no more than the second generation. I should not have said *all* because I note from my record that there were also two differing plicatas in first generation from Mme. Chobaut × Jubilee. Another season I hope to have something interesting from Sweet Cicely × Amber—another second generation, but I am to write of those that I've had rather than things hoped for!

There was one tall slender beauty of good size, with a decidedly yellow ground, pleasingly marked in a purplish brown (or maroon?), becoming a deeper yellow on hafts—style branches and rather vivid because of deep golden beard. The markings did not include the usual stitching. This was a greatly admired flower and I regret that in transplanting I lost its parentage. I think it came from a pink × unknown pollen, but not knowing definitely, I cannot say that is this or that. Other plicatas in first generations are from Little Dorritt (Benness) × Medrano—a light yellow or peach colored ground, S. & F., brownish purple markings with a brilliant beard—a feature characterizing most of them so far. The Chobaut × Jubilee seedlings had the ruffled standards of pollen parent and similar markings—one with white beard but not exciting. None of these were overly large flowers but with one exception they each had good form and substance.

There were two first generation plicatas with pink lavender markings from Emperor × Unknown pollen—another similar but entirely unknown parentage, but blues—on Parisiana style.

Still another, Emperor × White Sister, gave a blended background with mulberry markings; the *same plant* giving two bloom stalks, each different, but not of equal value.

The next and last that I now recall sufficiently to mention is a tall two-toned pink × Sunset. In shape, this made me recall at once that of Rose Dominion. I think and speak of it as that “queer thing” with the texture of a Cape Jasmine unmentioned as exceptions only go to prove the rule.

These have been inadequately described I know, but there was so little time to make exhaustive notes—garden visitors can be equally a joy and interference—and I never dreamed that I would wish that I had kept a more minutely detailed description.

MRS. W. H. BENNERS, *Dallas, Texas.*

FROM AN ILLINOIS GARDEN

You ask how I arrange my iris. I have them in clumps all along the edges of the garden with some taller ones farther back. Between and immediately back of the clumps are such things as columbine in quantity, polemonium—both the blue and the white—pale and deeper pink pyrethrums (with pale blue or white iris), coral bells with white, blue or certain deep red irises, and bleeding heart near blue or white. I am particularly fond of white gas-plants near almost any iris, and the pink is not at all a bad color used near pure white or pale blue.

As we go about the garden perhaps you will notice, here and there, the foliage of astilbes, Japanese anemones, or low shrubby chrysanthemums between some of the clumps of iris, or a bit of *Nepeta mussini* claiming a position in front of White Knight, or over there before Desert Gold, with Ariel nearby. Placed thus, its wandering stems will all come forward and not smother the iris, for it is a tractable plant, as you know.

You ask, too, about some favorite garden combinations. There are so many! None very unusual, perhaps, but since you troubled to ask, I'll mention a few like Bruno snuggled under an old yellow garden rose (Harison's, no doubt). They may open on the same day, as they did this year, or the rose may be a bit later.

A certain accidental arrangement enchants me: Kingfisher Blue (Sib.) stands tall and proud beside the pool, and back of it, four or five feet, in reality, and about eight inches higher than the iris, but from the house or the terrace, appearing as a quite close background, is a large and beautiful soft yellow columbine. They form a charming picture and one that was not planned.

I like a mass of pale pink single garden pinks—clove pinks, I believe they are sometimes called—before pale blue iris. And, by the way, in masses, this way the pinks command the attention and admiration of all visitors, I find, and their fragrance is delicious. In my own garden, I have three such clumps, one before Corrida and La Neige iris, with blue flax (*Linum perenne*) floating its slightly deeper Corrida-blue fairy flowers above and between the iris. The grouping seems to please everyone.

Another mass of the pinks is before Castilia, a pale blue of the late Mr. E. B. Williamson which has a delightfully clear tone. Realm stands not far away, with a creeping Chinese Juniper between all of them on a bank, sort of "flowing over" from top to bottom.

Do you use irises for cutting at all? I find *La Neige*, just mentioned, pleases me more than almost any other for this purpose. Its texture is so waxy and its substance so heavy. Then, too, its flowers are so bunchy in arrangement and this garden fault becomes a cut-flower charm in this particular case, for as one bloom fades and is removed, another one opens so close to the original position that the arrangement, itself, is seldom spoiled. A low white or black bowl of it just under a lighted lamp makes an exquisite picture.

My first T. B. iris to open is always a certain "Early Blue," as I call it, having received it, nameless, from a friend. A quite common old variety it is, for I see it often in other gardens, but no one can ever tell me its name. It is a deep blue bicolor and I have a large mass of it far back in the garden with a clump of *Aegir* tulips flaming before it. The picture is a vivid one, but most attractive. The tulips are a deep pink—almost red.

This same Early Blue is massed beneath a fairly large planting of Persian lilacs—another pleasing combination, and one that makes an effective arrangement in a large bowl, for the house, also.

Another color blending that I'd like to see is *Kochii* or Purple King beneath wild crabs. They bloom together here, and should make a lovely combination—possibly with a bit of *Bluet* to complete the picture. Unfortunately my crabs are in front of the house and so situated that growing flowers beneath them would not do at all, so I must be satisfied with a mental picture. Possibly there or some similar coloring bloom with some of your pink cherries in Washington? If so, someone may have tried the effect.

I'm fond of Mrs. Perry's Oriental Poppy back of pale blue or deep blue purple iris—or soft reds. Mid-season varieties should be used.

Iceland poppies come early and stay throughout the summer if kept from forming seed, and they combine well with almost any clear colored iris. Deep orange poppies with *Primrose*, *Celinda* (a warm white) or *White and Gold*; golden poppies with *Brandywine* or *Gleam*, or with *Madam Gaudichau*, *Tropic Sea*, or *Tenebrae*. *Candlelight* or *Asia* would be delightful with these yellow poppies were they not so tall. *Blue Velvet* with *Coronation* and a few orange poppies make a pleasant grouping. And white Iceland poppies—satiny and delicate—with everything. They lighten a

planting that might otherwise be too solid, as does Garden heliotrope (*Valeriana officinalis*) for the taller iris. Indeed I have this latter all about the garden (this is no effort, of course, for it seeds itself about so prolifically—the trouble is in keeping its numbers sufficiently reduced). Columbine, too, and lavender rue (*Thalictrum aquilegifolium*) serve this same purpose of lightening the planting, and Shasta daisies. I have the early midseason and late varieties of these and find them a continual joy all through the summer.

I find the foliage contrast of most of these plants with the iris of almost as much interest as that of the flower color or form.

The pale pink single peony Madeline Gautier opens with me a little later than iris midseason. Pavane, a dark red velvet iris, looks well with it. Numa Roumestan is nearly on another side with Marjorie Tinley not far away.

Were these peonies so placed that I could use tall iris behind them, I'd like to move Souvenir de Loetitia Michaud there with perhaps the lower and darker Veloute in front, and perhaps a white with a slightly pinkish tone—I've a seedling that's just right—for the peony fades to almost white as it ages.

I like forget-me-nots, too, before strong growing pink, white, or yellow iris, in varieties not too tall; say, Susan Bliss or Rheingauperle for the pinks, Sophronia, Snow White or White Queen for the whites, and for yellow, Primrose, Pluie D'Or, or Aurea (that old, old iris whose color has not yet been improved upon, to my mind, by any of the gorgeous new yellows that I have seen—wonderful as they are). A little care will keep the forget-me-nots from overrunning the iris rhizomes and if vigorous varieties are chosen, a temporary oversight of the matter, or an absence from home will not cause ruin to the iris. The forget-me-nots will carry on the blooming season after the iris are gone also. I especially like the pink and blue combination for the contrast makes the iris seem pinker than it really is—and with white iris the combination is very fresh and crisp looking.

MRS. FRED CLUTTON, *Highland Park, Ill.*

FROM A NEW JERSEY GARDEN.

In 1927, August, I bought six bulbs apiece of Anton Mauve and Albert Cuyp. The first was described as "pearl blue," the

second as "white with yellow blotch." As they sounded entirely different, I thought there could be no confusion if I planted them closely side by side. I have learned from experience what miserable confusion arises when the gardener plants two similar colorings of anything side by side, and has maybe one flower from the edge of one group, right in the middle of the double group, and can't possibly say which variety it is. This bit of knowledge is perhaps my best contribution to the gardening world, but does not help much where varieties aren't true to name. Certainly great confusion arose here. My notes for the following bloom season were naturally based on what colors I looked for. I had lovely flowers, three of them, not very big, delightful shapes and texture, bluish, yellowish, with deeper blotch. I assumed this was Anton Mauve. I had no white flowers, therefore, assumed that Albert Cuyp had winter-killed, and bought six more bulbs. The following year, my record states that Mauve, so called, bloomed May 28, and Cuyp, so called, May 28; that they were practically identical; that Cuyp was possibly a bit less colorful as to lavender, but that it was the better bloomer—nine flowers from six bulbs. I decided the whole lot were Anton Mauve, and under that name recorded all later blooms—nothing in 1930 and 1931, but one flower in 1932 and one in 1933, very permanent for a Dutch Iris.

Now in the American Iris Society BULLETIN of January, 1934, Mr. B. Y. Morrison describes Albert Cuyp as of just the coloring of my flowers. Can he throw any light on this puzzle? What have I? Mauve, or Cuyp, both or neither? And, why must dealers describe wrongly? And, why must they sell untrue stock? I dislike puzzles unless there are solutions. I dislike them anyway! After such a muddle, I hesitate to call anything by name, but the following notes are correct as far as I know.

1928. David Teniers, June 3—I think only two flowers from six bulbs. Very good shape—the same coloring as above—bluish and yellow; but the yellow in falls and blotch was deeper. Bloomed again the next year which few do here.

1930. Heemskerk—ten bulbs, two flowers, one in little cold frame, May 13; one in open, May 26. Big, lovely, ruffled shape—deep yellow, especially falls. Huchtenburg—ten bulbs, nine flowers, a superb record, four flowers in little cold frame, May 15, five in open, May 27 until June 5. Good shape and I think big

—wonderful coloring—palest gray; bronzy orange; styles pale yellow—by far the loveliest Dutch Iris I have seen. Rembrandt—five bulbs, one good and one poor flower—beautiful, a darker blue than most, but not as good grower here (of an earlier planting of six bulbs, only one poor pale flower). White Excelsior—six bulbs, three flowers—May 27 until June 5—creamy white, then pure white—gold blotch. Yellow green stain up back of falls. Very lovely, second only to Huchtenburg in beauty. Thérèse Schwartz—six bulbs, one poor flower, June 1. Small. Narrow petals—not quite white, a faint wash of lilac in standards.

1931. Wedgewood—five bulbs, one fairish flower May 21—wonderful that it bloomed at all for it was planted on March 22; a lavender blue exactly matching the type form of *Scilla campanulata*. Frans Hals—five bulbs, seven flowers (the big bulbs had broken up into many small in planting). May 25, opened very round and compact. S. fall blue, deeper as flower developed, sometimes a lovely hint of grey like Huchtenburg's; F. pale yellow. Big gold blotch—a vigorous and lovely variety. D. Haring—five bulbs, four good flowers and one defective bud May 30. Good size—long, slim flower. S. white, just touched with lavender. F. cream with small gold blotch. Second only to Frans Hals in this 1931 set. Adrian Backer—five bulbs, one flower, May 31. S. a very good soft lavender blue; F. and styles the faintest possible blue. (I am sorry that the two light “blue” selfs, so needed in this group, Wedgewood and Adrian Backer, seem not very good growers). Poggenbeek—five bulbs, one flower May 31. Good size—rather long petals. I had expected a deep blue, like the Spanish Iris, King of the Blues. This is much lighter, I think. S. are much deeper than F.; yet the whole flower is of a definite blue. Long slim gold blotch. I wish I might have been able to compare this with Rembrandt. I think the latter is a little deeper blue—all this 1931 set were in a small cold frame, which was not of the best color.

Complete failures here, not one flower from any were Jan de Bray, J. Weissenbruch, David Bles, Theode Boch (each of them planted only once), and Hart Nibbrig (planted four times).

The best varieties were Huchtenburg, White Excelsior, Frans Hals, D. Haring and the Anton Mauve-Albert Cuyp puzzle.

Iris unguicularis—complete failure from two plantings. Then, in 1927, I bought two more plants, put them in a better place and

protected with a small cold frame for the winter, airing occasionally. The first flower appeared on April 12—not my idea of a winter bloomer. It was not even very pretty and lasted only one day in a vase. A fairly deep blue-lavender, gold and white at the haft, back of falls gray. About a week later, three more flowers. The second winter, no protection but leaves and both plants died.

Iris unguicularis alba—failure from first planting. Then, in 1927, one plant in cold frame with the two blues. In 1928, it bloomed about April 19, a week later than the blues. A very poor flower, small and thin, and it shared the fate of its companions in the second winter. In my notebook, my callous comment was: “Glad to be rid of them all.”

Iris unguicularis angustifolia. The one planting was a failure.

Hermodactylus tuberosus—In two tries no bloom to report. In the second attempt, November leaves were formed a month or so after planting, and I thought I recognized a leaf in February, a little over two years later. I tried these with a cold frame and without one.

AGNES FALES HUNTINGTON.

DEAN HOLE'S APPRECIATION OF THE JAPANESE IRIS

“Of all the plants which must be grown in contiguity with water, either on its banks, or where it may be introduced when required, *Iris Kaempferi* is the most beautiful. Our most grandiloquent adjectives, our *sesquipedalia verba*, are so enfeebled, as I have shown, by their perpetual application to insignificant objects, that they are altogether impotent. I shall not attempt to describe it beyond a few simple details, but I shall never forget my first introduction to a large bed in full flower, outside the end of the lake at Newstead Abbey, where the water could be admitted at will into the sluices between the rows of the iris. The varieties selected in, and sent direct from Japan, were somewhat like the Clematis in form, and were six to eight inches in diameter, and were of diverse colours—white, rose, blue, purple, grey, and crimson. They evoked a delicious surprise and excitement, very rarely enjoyed by one who has lived his life among the flowers, and has seen most of the famous gardens of England, Scotland, France and Italy, including *La Mortola*, which is to me the most charming of them all. It was one of those happy

astonishments, which 'when they seldom come, they wished for come'; and though the attraction was some distance from the house, I was perpetually wandering to and fro, under an irresistible fascination, to this iris and apple of mine eye."

From *Our Gardens* by S. Reynolds Hole, published in
London, 1899, by J. M. Dent & Co.

QUOTATION FROM LETTER OF MR. PETER BARR TO DEAN HOLE (1899)

"*Iris Kaempferi* will often thrive on ground which one would not choose for it, and will fail on ground which one would have supposed to be most congenial. At one time I bestowed a great amount of trouble upon them, but was not so successful as when I gave them a less anxious care Our *Iris kaempferi* was in the driest part of the Tooting grounds this year (1899), and the quantity of buds surpassed anything I have seen, but the flowers were comparatively small. On one occasion I tried, as an experiment, a bed made of loam and peat, one part being exposed to the sun and the other in the shade: The former had plants three and four feet in height, the latter were less and the flowers few. I would recommend you to get some sleepers from the railway station, and to place them on bricks to secure drainage; to fill them up with a suitable compost to within three inches of the surface, planting the iris a foot or eighteen inches each way, the collar of the plant being level with the surface of the soil, which must be kept open to catch all the sun's rays in spring and summer. In May they must have water, and if the weather is dry, two good soakings in the week with a slight admixture of mild manure, until they have ceased to flower."

COMMERCIAL INFLUENCE.

"The chief beneficiaries are the Iris specialists," was the comment about national and regional lists of recommended varieties, by an executive of one of our State institutions. He may have believed either that such tabulations primarily represent propaganda for high-priced novelties of which a few growers have considerable stock for sale; or that the commercial votes are numerically sufficient or the point-scoring system prejudiciously designed, to give such novelties high rank in their classes, regardless of any sterling merits inherent in older and lower-priced favorites.

We disassociate ourselves from any conviction that the honest

opinions and the straightforward actions of our commercial specialists are a questionable influence in the conduct of the affairs of the Society. There is a loyalty to the Society, a loyalty to the commercial specialist's better self, a loyalty to his amateur-member customers—and all three can coexist.

Before my interest in the Society was more than a desire to improve my own collection with such guidance as our BULLETIN afford, I had been for a considerable time a member of three or four other societies for the improvement of flowers of other genera of which I have long grown many varieties. And my belief is that the integrity of our commercial-specialist members is second to that of no commercial group in any other floral society within my experience.

I have purchased rhizomes from various specialists from coast to coast. With a single and perhaps excusable exception, their stocks have later proved true to name with me. Invariably their rhizomes have arrived well packed, labelled painstakingly and legibly, in good condition, of satisfactory or better size, and clean as a hound's tooth. My special inquiries of them as to details about the quality and growing habits of novelties of their offering have brought without exception, replies that have been found frank, straightforward and dependable.

Face to face, I have met at least 12 of these commercial-specialist members whose collective judgment as to the quality or merited rating of any novelty, I would consider equally as reliable, if not more reliable, than the collective judgment of any 12 of our non-commercial members with whom I have had face-to-face acquaintance.

Moreover, I do not believe that the percentage of human frailty in trade is any greater than in any other reputable occupation or profession.

While individual and corporate conduct of the normal course of trade in America has long been controlled with relatively few exceptions, by the highest standards of integrity, we can say as much neither for certain less common trade practices without similar sanctions, nor for local political ethics. Propaganda and camouflage have been their specialties.

In New Jersey, for example, was offered the illuminating privilege, last year, of voting for a proposal simply described on the ballot as a law "to improve the breed of horses." Looking behind

that seeming simplicity, one found the mechanism to legalize race-track gambling. Thus the voters' representatives were accessories before the fact to camouflage, deception and concealment.

While any Iris breeder may lawfully publish only such facts as he chooses about his seedling novelty; while any commercial specialist may lawfully withhold vital facts about a variety in the absence of circumstances that place upon him an enforceable duty to disclose them; nevertheless, it is, I believe, true that "intelligent self-concern is founded on service to *others*." No longer is it intelligent or even expedient to wink and say "Let the buyer beware."

And while the By-Laws of our Society announce among the methods by which to attain its stated major object, a purpose favorable to the "encouragement of Iris breeding"; and while such encouragement must necessarily presuppose opportunity for remuneration for breeders' arduous labors and for commercial growers' risks by investment in stock of novelties; nevertheless, as stated both in the declaration precedent to issuance of the Society's Certificate of Incorporation, and in its By-Laws, the first object of the Society is declared to be "to promote the culture and the improvement of the Iris."

The still small voice tells me that if the declared method ("encouragement of Iris breeding") *were* found to be but a screen like that "to improve the breed of horses"; if such method *were* but a screen serving merely to put our amateur members in the position of being unintending accessories to similar camouflage and concealment of vital facts which gardeners must generally come to know if a steadily widening acceptance and culture of the Iris is to be attained; if this *were* true (but it is not), how great would be the flight of amateurs from the membership list!

For these reasons, in the absence of evidence to the contrary, the term "commercial influence" when used to connote the exercise of undesirable or improper power or authority in the Society, I consider as exaggeration if not approaching invective.

It is suggested, however, that inspecific and vague if not evasive and at best opinionative, adjectival tags such as "fine," "wonderful" and "perfect," when tied to form, texture, stalk, etc., do not constitute explicit statements of fact within the letter or spirit of standards for actual explicitness such as are shown on page 18 of BULLETIN No. 6.

And if it be alleged that the BULLETIN doesn't publish varietal

descriptions in the style of catalogues, as a reason for blue penciling or rejecting compliances with those standards, then such a reason or explanation would seem to be evasive; for it is indeed an exceptional catalogue that adheres to those standards of explicitness.

Further, I indulge the hope that more than a handful of our commercial members, being themselves buyers of other breeder's novelties, may eventually support the adoption of a more definite policy by the Society, for the publication in the BULLETIN, of *all the vital facts* about at least the highest-rated novelties,—both the unfavorable facts, if any, as well as the favorable; both facts as to averages of ratings and as to plant habits.

When I see varietal puffery that emphasizes only color and size only when large, and which includes no, or almost no explicit statements of fact as to important qualities such as form, proportion, floriferousness, increase, susceptibility to root rot, hardness, branching habit, growth, placement, height, substance, texture, etc., then I think that perhaps I understand why some members have mental reservations about what they think of as commercial influence.

The discontinuance of any intentional withholding of relevant facts about novelties, is considered to be a necessary preliminary to the fullest measure of success in our object, “to promote the culture and the improvement of the Iris.” For in ratings of Irises, as in decisions at law as Mr. Justice Brandeis says: “Judgment should be determined upon a consideration of (all) the relevant facts: ‘ex facto jus oritur.’ ”

M. E. DOUGLAS, N. J.

BETWEEN THE LINES.

I have read Mr. Essig's splendid article in the A. I. S. BULLETIN 52 with a great deal of interest and would like to commend its careful and thorough attention to detail as an example to all present and future breeders of Iris—or breeders of anything for that matter.

Breeders working in other regions will naturally lay their experiences side by side with those of Mr. Essig and while reading his, will interpolate from their own, sometimes agreeing, sometimes differing, a sort of running commentary between the lines. It is in this manner that I am writing now.

His records showing that successful pollination can be had at almost any time after the flower opens until the stigma fails, I

believe to be pretty closely limited. Probably this finding would apply only to areas under irrigation, despite his specific mention of cloudy and foggy days. Here in Washington, D. C., typical of the humid East, with extremely heavy dews in the mornings and with frequent rains, I believe the time for successful pollination to be quite limited, probably to a few hours of each sunny day.

And in the matter of curing seed after harvest we of the East must pursue a slightly different technique if we are to prevent molding of the seed. Here it is usually advisable to remove the seed as soon as the pods begin to open, and spread them in thin layers in an airy position so that drying may be hastened. If not so handled they will remain moist for a long time and not infrequently become covered with mold. Whether this affects germination unfavorably I have never learned with certainty but I prefer to get them dried before any fungus growth of this kind takes possession.

In Mr. Essig's concluding paragraph there is a rather arresting statement that "In many cases there were a number of desirable ones from the same pod and it appears that *all are either good, fair, or poor.*" (The italics are mine.) By and large this experience tallies quite well with my own wherein one small family yielded Sequoiah, Coppersmith, and L'Aiglon, all one-time winners of H. M. from the A. I. S. A duplicate later breeding of the same parents also produced uniformly superior progeny though not greatly widening the range shown in the first. Other families have been only medium in quality without a really outstanding individual, again bearing out the Essig conclusion.

But neither theoretically nor practically can we accept this conclusion as more than a broad generalization. In my own practice I have accepted it to the extent that I do not care to produce thousands or even hundreds of seeds of an untried parental combination. A small family, with much less labor and space required, may indicate pretty well what may be expected from that specific combination. But failure to work well together should not be looked upon as a condemnation of either parent separately. Each, used in some other combination, may result in superior progeny. The real problem of breeding is to find parents that will supplement each other, fill each other's deficiencies.

Theoretically—and practically—you may get a very superior individual as the result of mating mediocre, or even extremely poor, individuals, so long as any good qualities of different character re-



[SEE PAGE 108]

FROM DR. FREDERICK HANES

main inherent in both parents. Any offspring that should by chance inherit all the good qualities of both parents, is thereby necessarily superior to either of its parents—but it may take many thousands, possibly a million, throws of the dice for this one fortuitous combination to turn up.

In like manner, two outstanding individuals, again with good

qualities reciprocal rather than duplicating, will produce mostly highly superior progeny—but in the same number of thousand or million descendants there may occur the one case in which all the less desirable qualities of both parents are combined in one individual which will then be necessarily inferior to either parent. In so complex a subject as the Iris none of us produce families running up into the millions required for ready demonstration of these extreme theoretical possibilities, but their existence is merely a matter of mathematics.

In speaking above of “good qualities” in a parent I would have the reader think not solely of the qualities actually apparent in the particular variety under consideration, but of those desirable qualities that have been prevalent in its ancestral picture covering as many generations back as possible. These are the qualities that may really be counted on in building improvements for the future. And finally, let all breeders, experienced or inexperienced, hardened criminal or first offender, take a leaf out of Mr. Essig’s book and keep a complete record of all performances.

J. MARION SHULL.

IRISES IN THE HOUSE.

It is always interesting to see arrangements of bearded iris in the house and this charming picture shows the use of leaves with flowering stalks that might well be studied, since it brings out the essential growth characters of the plants that rarely show if one uses only flowering stalks or leaves cut singly.

OUR BULLETINS

Descriptions—Nos. 6, 7, 9, 12, and 29. Price, as a Set, \$2.50

Descriptions of Bearded Irises may be deadly dull but they are like the Alphabetical Iris Check List (\$1.50) most convenient for reference. Of course, in both cases one would prefer a volume that was thoroughly up-to-date rather than a bunch of bulletins but as long as the iris interest remains alive there will be new varieties to name and describe each year.

Of even greater importance and particularly to the newer members are the methods of describing, the definitions of terms, the classification as to color, or season, branching or form. It is only when we look closely at an iris that we begin to appreciate not only how different they may be but how much fun it is to attempt to describe, in words, just what these differences actually are and how we may value them. Both we (and the catalogs) say a variety is the finest pink, most beautiful, splendid or what you will but after we have called ten, twenty or a hundred varieties "fine" we are beginning to wish for a bit of variety, a bit of knowledge as to the truth and if true, then why. We may still like the variety but, as with real friends like it despite its faults.

As it happens these bulletins carry other notes of interest; The Bulbous Irises, the Work of William Mohr; original observations on bud development, root growth, and forcing; and our first compilation on Chromosomes; in addition to the current notes on varieties and garden uses.

I wonder is it that I am getting old (in iris lore) or is it a common failing to get more kick out of the past (bulletins) and the hows and whys and by whoms the present (irises) developed?

The Society now has a supply of leaflets giving list of all BULLETINS published in the past and still available to members.

There is also listed the available supply of other publications that may be had. A copy is yours free if you ask for it. Please address the American Iris Society, 1918 Harford Avenue, Baltimore, Md. Remember the address.

COMMERCIAL DIRECTORY

All of the dealers listed below are members of The American Iris Society. If you are buying iris for your garden, it should be your particular pleasure to make your purchases from the dealers who have worked with and supported your society. Your officers and directors invite your particular attention to this list. They also ask a favor. When you order, tell the dealer you saw his name in the BULLETIN and do him a favor by not asking for a catalog unless you mean business.

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The American Iris Society



ALTHOUGH ALL READERS of the BULLETIN are supposed to know that the annual dues of the Society are three dollars payable by the calendar year, it has been called to our attention that there is a chance that someone who is not a member may read your copy and wonder how he too may become a subscriber. It is for that reader that this last page has been added. If you happen to be such a reader, let us assure you that the Society welcomes to membership all persons who are interested in iris who feel that special knowledge of iris would be welcome in their gardening.

Make your check or money order payable to the American Iris Society and send to Mr. John Ferguson, Monumental Printing Company, 1918 Harford Ave., Baltimore, Md. Please follow this instruction. It will help us all in the record keeping.



BULLETIN
OF THE
AMERICAN IRIS SOCIETY

DECEMBER, 1934

REPORTS AND BUSINESS, 1933

NO. 54

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THE AMERICAN IRIS SOCIETY

■ In presenting a separate bulletin in which might be recorded the several matters that have to do with the business of the Society it is the feeling of the officers that these can be made into a record that need not be hidden among the bulletins' texts that more properly should devote themselves to the praise and promotion of the Iris.

It has been difficult to assemble precisely what was wanted and the success is only partial. Your patience is expected and your cooperation invited to assure the correction of any errors and to make certain that the extra bulletin for 1935 will be far better than this one.

B. Y. MORRISON, *For the Secretary.*

REPORT OF THE PRESIDENT FOR 1933

■ The American Iris Society has come through the year without the large drop in membership that was feared and expected. It also has a good bank balance and sound assets, both unusual nowadays. The BULLETINS have been most interesting. Representation at the Annual Meeting was from eighteen states from Maine to Texas to Minnesota to California. It was a fine Iris year in many sections.

Two members of our board have been taken from us by death during the year. Mr. E. B. Williamson died on February 25th. A tribute to him was spread on the minutes of our April meeting and BULLETIN No. 48 was dedicated to him. Mr. Franklin B. Mead died on November 29th. He was a charter member, had served as vice-president in 1924 and 1925; as Regional vice-president from 1925 to 1927, and as director since 1928. He was regular in attendance at meetings and always a good friend of the Society.

During the year the perennial problem of a divided secretary's office, part in New Haven and part in Lancaster, has been solved unexpectedly and happily by the willingness of Mr. B. Y. Morrison to take over the duties of both offices. He enters upon his new work with the best wishes of all of us and with the heartfelt thanks of the two secretaries who preceded him, each with a seven-year term. They know what a job it is and how thankless. I hope the Board will express its thanks to Mr. Wallace in terms

vigorous enough to make him forget the lack of appreciation by the disgruntled.

Emphasis on the number of years the two secretaries have served brings me quite naturally to the many years I have served as your president. I believe strongly in making the term long enough so that the individual may have full opportunity of carrying out his proposed program. I am grateful to the members of the Board and to other members who have helped me and worked with me. To them I shall always owe thanks. But I have felt for some time that the length of my term was unfair both to the Society and to me. Therefore, I informed the directors a year ago of my desire and determination to retire at the end of fifteen years of service. That time is now only a year away and I mention it again so that you may be reminded that I really mean it and I beg you not to try to make me change my decision. As you all know I have loved the work; undoubtedly I shall miss it in many ways. But I am positive that both the Society and I badly need a change. It is not good for one person to bear the load too long. The Society will not suffer for good work cannot be done by one who feels that the work has become an unfair burden.

This has been one of the most difficult years in our history. Not only have the members been unusually critical, due perhaps to their interest in the controversial subjects of awards and ratings, but members of the Board have disagreed with the policy of the Society, of more than one committee and of various officers. I was so troubled last winter that I called a special meeting in April to examine into the by-laws and to put in black and white the various powers and functions of officers, committees, etc., powers and functions which had grown up by custom and which are understood by some and challenged by others.

After long discussion I put what seemed to be the sense of the meeting into a four-paged mimeographed pamphlet which was sent to all directors before the Freeport meeting and which in the absence of further comments was confirmed at Freeport. This statement should make the work easier in the future by avoiding misunderstandings. I say should advisedly because already there have been complaints that one committee has overstepped its authority and that one officer has acted contrary to the expressed policy.

JOHN C. WISTER, *President.*

REPORT OF THE VICE-PRESIDENT

■ It is presumed that a more or less personal slant on the activities of the Society in 1933 is not out of place from the Vice-President. It is difficult to confine this report to that office alone since the present incumbent was also the Chairman of the Committee on Awards.

The Vice-President and Award Chairman wishes to express a feeling of deep pleasure at the vast number of letters which have reached him. Many letters are unfortunately unanswered, but all have been read, considered, and many ideas have been used in his letters to the directors, the award committee, the Regional Vice-Presidents, and the accredited judges.

It has been hard to reconcile the varying viewpoints from different sections in which iris are grown. Many of the problems are still under consideration, and final decisions will be reached after further correspondence and study by the directors.

I feel, individually, that too much stress has been placed on rating, and the giving of awards. There has been some confusion in the interpretation of the award policies. The directors clarified this situation, but did not feel it wise, without further deliberation and discussion, to modify the existing code—that of 1933. I believe the methods of rating could be greatly simplified with profit to all. It is too much to ask of any judge to spend hour after hour, and day after day, in the broiling sun rating iris. There are too many point divisions in the present score-card to be minutely considered, as one goes through extensive plantings. It becomes an insuperable task.

The most valuable information on any iris is not whether it rates 85, 90, or 95, but whether it is frankly better than San Francisco, Dauntless, or whatever may be an acknowledged leader in its particular class. One must have a description of its outstanding qualities, and more especially of its faults. Then the average amateur can buy without any fear of making a mistake in his purchase.

1933 brought a certain welcome restraint in the over-enthusiastic introduction of new varieties. Breeders and growers were more conservative, and have recognized that in the pages of almost any catalog enough fine varieties of iris can be found to make a garden wonderful beyond compare.

Climatic regional ratings are now under consideration. To aid the committee to divide the country into zones, we must have more and still more varietal notes and behaviorisms under varying climatic conditions.

When submitting varietal notes be more charitable than you have been. Don't condemn an iris because it just won't do with you, nor should you think the introducer "crazy" for offering it. You should know that somewhere it does splendidly. The fault may lie with you, and your methods of culture, and not with the iris itself. Dominion or Mesopotamica blood may, or may not, contribute to its frailty. Hybridizers are now combining the beauties of these two strains with the hardiness and prodigality of the older varieties.

I cannot understand people saying variegatas will not do with them. Why not try various conditions and places in your garden; I am sure you will find some spot where even a variegata will be happy! Breeders in your region should strive to produce a stately, hardy variegata for you.

It is apparent that many of the members have forgotten that the iris is only a part of the garden picture, that just iris does not make a garden. Let iris be your key, and build your garden around it. Recognize the necessity of considering color combinations with other plants besides iris. Garden beauty does not depend solely on colours; form and texture are essential factors, design is even more important.

Mr. Morrison aptly expressed in a recent letter a conviction which I have held for a long time, that your Society is not merely the American "BEARDED" Iris Society.

There are untouched fields of endeavor in the hybridization and utilization in our gardens of our native species and varieties. Mr. Washington, Mr. Williams, and the few others who are doing pioneer work in this field, are to be congratulated. No bearded iris has the grace and poise and delicate beauty of a well grown clump of the beardless. The dwarfed beardless have a daintiness which is unknown to their bearded relatives. To our own native iris we can add with profit the species which come from abroad, and which have graced the meadows or hillsides of far off Siberia, China, or Japan.

When as much time has been spent hybridizing the Apogons

as there has been on the bearded type, when certain cultural difficulties have been met, then the demand for Apogons will surprise our over-cautious dealers.

I often wonder if you, as members, realize that in your neighborhood you have a Regional Vice-President who stands ready to help you with your problems, whether they be individual or come from the little group to which you belong. The office of a Regional Vice-President is not a decorative one, and should be taken seriously by each and every one of the Vice-Presidents. Your BULLETIN tells you your own Regional Vice-President, write to him for advice.

The value of a Society, such as ours, rests not in the flower which we hold incomparable, but in the contacts and the friends we make.

Now is the time to plan your iris pilgrimages. It may be only a visit to the garden of your next door neighbor, or far away by train or auto to a garden which you only know from the pages of our friendly BULLETIN or from the lips of some happy pilgrim who has seen this garden and who has met its proud owner.

Of course the high point of iris activities each year is the Annual Show, here the most rabid fans gather for a day or two of hospitality at the hands of some eager garden devotees, who are keen to show you that beauty is not a thing confined to any one region.

This brings me to a pet subject of mine—that of a “courtesy garden.” By that I mean, the portion of some one’s garden where iris can be sent for trial and where they can be assured of the best of care, before they are sent back to the breeder whose property they should remain. Public trial gardens have not proven a success; the chance for the loss of a valuable seedling is too great to trust it to any one but a profound lover of the iris. In 1935 the Show will be held at Nashville, and I suggest that you write Chancellor Kirkland or Mr. Connell, who will be glad to find place for these beautiful and welcome guests. In this way the A. I. S. Show can be made a truly National Exhibition.

There are other gardens which are the mecca of iris fans during iris time reaching from sunny California to rockbound

Maine, to which seedling iris should be sent. I know that if this plan was pursued by all hybridizers, we of the iris world would know just where to go and no worthy iris would go unsung.

New iris would be readily available for judging, even the 5-year period is all too short for distribution of an iris, and no one can have all the iris in one's own garden. This scheme would give pause to breeders who rush to introduce just another "almost an iris" in an already top-heavy market!

I want to emphasize a point in closing which some of you seem to have forgotten—this A. I. S. of ours is a simon pure amateur Society—dealers and growers exist because of you and for you, and should recognize the fact.

H. H. EVERETT, *Vice President.*

REPORT OF THE SECRETARY

■ In making a Secretary's Report for the calendar year of 1933, I believe a comment on the present membership to be the most important fact to place before you.

The membership as shown by the November 15, 1933, report from the Science Press Printing Company totals 885 members, and inasmuch as what memberships that have come in since that time were for 1934, I believe that this may be accepted as the figure for this year. This compares with a membership of 954 in 1932, 1129 in 1931, 1233 in 1930, 1202 in 1929, 1225 in 1928 and 1044 in 1927.

You will note from these figures that our membership arrived at a figure slightly in excess of 1200 in 1928 and staved approximately the same for the years 1928, 1929 and 1930, but since then has shown the decrease to be expected from the general conditions.

In view of the fact that the decrease was no greater than the officers anticipated, and is probably a smaller percentage of loss than similar organizations incurred, who did not make any attempt to artificially stimulate their memberships, I believe that the American Iris Society should be congratulated on having held its membership as well as it has done, and I think that it would be safe to assume that the low point has been passed with 1933.

Insofar as I know, the Society this year has failed to receive a

single Research Fund Membership, and I would like to recommend to the directors that this form of membership be abolished and that some new form of membership, which I would suggest calling a Garden Club Membership, be started, with sufficient inducements attached thereto to make an attractive proposition for Garden Clubs throughout the country. Without giving very serious thought to the subject, I would like to suggest that such a Garden Club Membership would entitle a Garden Club to two copies of our BULLETIN, a discount of 50 per cent in the use of our Lantern Slides, and a preference in the use of the Farr Memorial Library.

It gives me great pleasure to say that this year only six of the twelve complimentary memberships which were authorized at my discretion have been used, and in all of these cases they seemed to be greatly appreciated by the recipients, who had written in that they were forced to resign for financial reasons, and I would recommend that you again authorize a dozen free memberships to be utilized by the Secretary for the year 1934.

I am unable to give any definite facts as to the amount of correspondence handled by the Secretary's Office, but do not feel that it has been greatly lessened in 1933 by the decrease in membership, as inquiries from non-members have been on the increase. I have attempted to give all such inquiries individual attention, rather than to use form letters, and have sent out a membership blank with every letter to non-members and believe that quite a few new members have been obtained in this way.

In view of the fact that a new Secretary is taking office on January 1, 1934, I believe that this is the proper time to call the attention of the Directors to the fact that neither the President, Secretary, nor Treasurer have ever made any charge to the Society for postage, and while this item is perhaps not a large one, nevertheless it is not businesslike, and I would suggest that commencing with 1934 that all the officers be supplied with a definite amount of postage and urged to put through a voucher for more when expended.

In closing this, my last Report, I wish to express my thanks and appreciation to the officers and directors who have assisted me so greatly during my term of office, and have made the work very pleasant.

JOHN B. WALLACE, JR., *Secretary.*

REPORT OF THE TREASURER

DECEMBER 1, 1933

Cash Chemical Bank & Trust.....	2,747.05	
Cash Special Interest Account.....	293.50	
Cash Farr Fund.....	392.47	
Bonds:		
Cleveland Union	\$1,000.00	
Shell Pipe	500.00	
Northern Pacific	500.00	
Paramount Broadway	1,000.00	
National Dairy	1,000.00	
Liberty Bonds	2,850.00	6,850.00
Farr Fund Bond		500.00
Iris Check List	1,700.00	
Less Sales	345.15	1,354.85
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TOTAL		\$12,137.87

PROFIT & LOSS STATEMENT

SIX MONTHS, JUNE 1ST TO DECEMBER 1ST, 1933

INCOME

Annual Membership	\$342.00	
Tri-annual Membership	8.50	
English Society	24.91	
Check Lists	7.50	
Dykes	11.30	
Sale of BULLETINS	24.50	
Advertising	287.50	
English Bulletins	2.00	
Slides	16.00	
Bank Interests	2.53	
Miscellaneous	16.65	
Income Farr Fund	12.50	
Income from Bonds	154.85	
White Endowment	25.00	
	<hr/>	
TOTAL		\$935.74

EXPENSE

Administrative	\$250.42	
Stationery	90.00	
Steno and Type	205.79	
BULLETINS	1,209.27	
*Miscellaneous	236.59	
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TOTAL		\$1,992.07
		<hr/>
NET LOSS		\$1,056.33

* Includes bill of \$214.77 for taking care of 1933 subscriptions.

COMBINED PROFIT & LOSS STATEMENT

ONE YEAR, DECEMBER 1ST, 1933, TO NOVEMBER 30TH, 1934

INCOME

Annual Membership	\$1,994.15
Tri-annual Membership	76.50
Sustaining Membership	20.00
English Membership	65.37
Canadian Membership	3.75
Check List	14.00
Dykes	19.50
Addisonia	20.00
Sale of BULLETINS	92.20
English Bulletins	2.00
Advertising	414.00
Slides	16.00
Miscellaneous	25.09
Membership Lists	2.50
Bank Interests	8.81
Income Farr Fund.....	25.00
Income from Bonds	313.51
White Endowment	25.00

TOTAL	\$3,137.38
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EXPENSE

Stationery	\$621.08
Steno and Type	180.00
Miscellaneous (Administrative)	425.91
BULLETINS	1,900.31
Slides	36.00
Medals	54.50
*Miscellaneous	252.94

TOTAL	\$3,471.74
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NET LOSS	\$334.36
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* Includes bill of \$214.77 for taking care of 1933 subscriptions.

RICHARDSON WRIGHT, *Treasurer.*

REGIONAL REPORTS FOR 1933

M. E. DOUGLAS, *New Jersey*

■ Early in 1933 an announcement by President Wister of my appointment as Regional Vice-President was mailed to all of the present members, and to a few former members, in the three states.

Immediately thereafter I mailed to all of them a quasi-questionnaire and circular letter which sought to elicit suggestions as to how I might be of service to them and which offered various forms of cooperation.

Aside from the desire thus to serve individual members, my thought was that this offer of itself might be instrumental in holding some present members who otherwise might drop out, and perhaps in getting other members.

The replies indicated complete satisfaction in the three states with the conduct of the national affairs of the Society by its officers. Not one negative note was sounded in any reply nor in any later conversation with any regional member. On the contrary, I heard enthusiastic comments about the personnel of the national management and wide appreciation of the contents of the quarterly BULLETINS. Incidentally, several hundred multigraphed copies of forecasts of contents of the later 1933 issues of the BULLETIN were placed where it was hoped new members might be attracted by them.

I am happy to report therefore that our members favor the maintenance of the forward-looking policy and program of the Society.

Of the several forms of service which I tendered the members the one which seems to have been productive of the best results in the way of publicity for the Society, was my offer, entirely without charge, to meet in 1933, any group of 25 or more iris lovers, anywhere in the region, for a roundtable talk.

This offer brought calls for me to talk about the iris before groups of enthusiasts to the number of perhaps 500 people. Thus through the kindly instrumentality of our member, Mrs. B. A. Stewart of Newton, N. J., I enjoyed a delightful evening at Newton, with the Sussex County Garden Club. Mrs. Hollingshead of Sparta, president of the club, presided.

Later, Mrs. H. H. Clark who has long been active in the garden work of the New Jersey Women's Clubs arranged for a similar Iris discussion with the Woodbury and Wenonah Clubs at the home of Mrs. L. B. Moffett, of Woodbury.

Then our member, Mrs. Benjamin S. Mechling of Riverton, N. J., took the initiative in making arrangements by which the Riverton Club in a body came to my home for an Iris talk and to see the Irises here then at the height of their bloom.

In September, at the request of Mrs. William P. Chalfant, of Pitman, N. J., I talked before the Pitman Club at a meeting in the Methodist Church in that city.

And the Haddonfield, N. J., Club has made arrangements to come in a body to my home in May, 1934, for an Iris discussion and to see my Irises as did the Riverton Club last May.

Throughout the season in 1933 the garden was at all times open to visitors. Not counting club groups which came en bloc, it was a common occurrence for from 50 to 100 visitors a day to come, many of them from considerable distances. Each succeeding year increasing numbers have come and from greater distances, although I sell no rhizomes. Thus I know that interest in the Iris is growing.

In late June, the increase of my Irises compelled me to dispose of several thousand surplus rhizomes of standard varieties. An advertisement in a local newspaper listed their names and colors. They were offered without charge to whomsoever would come for them. And how the people came—in a steady stream two days long until the surplus was joyfully removed. Some garden lovers sent their cars and chauffeurs, many more drove their own cars to get the rhizomes; neighbors came on foot; one working-woman with a baby in her arms trudged from her home a mile and one-half away, pulling a boy's wagon to get hers; young and old came, whites and blacks, Gentiles and Jews, Anglo-Saxons and Italians.

From this experience I would say that in South Jersey the Iris is as popular as it was in the country of M. Cayeux when King Clovis made the golden Fleur-de-lis a part of the royal banner of France.

If it be that any Iris collector has mental reservations against the practical wisdom of having his garden open to visitors at all times, let me reassure him. Notwithstanding the many who have

come, no visitor has injured any of my plants and none of them have been taken without permission.

Yes, I know how one may feel while in the garden taking Iris notes with all too little time for it and with darkness coming on, when one visitor after another interrupts with: "What is the name of this one?" or "Did William R. Dykes bloom for you in the open garden?" etc. Incidentally, my three plants of William R. Dykes, planted in midsummer, 1932, made no bloom stalks in 1933; but Mrs. Mechling's single plant bore gorgeous unflecked great blooms in the open garden this year, winter-protected by what she called a "cute little wooden coop."

I also know how, at such times, one who will may feel under the almost breathless questions of children who seem to see not Irises, "but white and purple butterflies, tied down with silken strings." If Mary Fenellosa had an Iris garden, I am confident it was open to children.

And I know too how it feels to receive from one with whom I have no recollection of speaking, or of even seeing, a letter such as the following which was mailed to me from a city hundreds of miles away. The writer of it must be nameless here, and the address and date withheld, for I am without permission to disclose them. The letter:

"I spent the winter and spring in Woodbury with my sister while recovering from a broken back.

"It was a regular part of our program to wander about your garden and to keep track of each individual plant.

"I want you to know that your garden played a definite part in my recovery, for the great pleasure it gave me and for the faith and the hope which growing things stand for.

"And not the least part of its help was the knowledge that people will plant gardens for others to enjoy. On every hand we heard that you liked to have strangers come to see your flowers. I think you should know how very much I appreciated it.

"And too, you may like to know that I am making what is considered a miraculous recovery and will eventually be as good as new."

This gracious letter seems to suggest that it is unusual for a grower to enjoy having strangers come to see his Iris. Over-much credit is thereby given me for in this I have but feebly imitated the open sesame by which I have been made welcome in Iris time

by growers from Massachusetts to California and overseas. True, I have heard of gardens disfigured and of growers belied in Iris time by "Keep Out" or "No Trespassing" signs or attitudes. But I have yet to see the former and to meet the latter in the flesh.

Of course, this open-garden suggestion in no way applies to circumstances or occasions which compel the closed-garden alternative,—such as for example, the personal need to enforce extreme privacy of sanctuary, or full quiet, or uninterrupted attention to invited guests, and the like.

I have been told, not by commercial growers, however, that it is not to their advantage for amateurs to give away their surplus as I do. Yet, an inner small voice tells me that those to whom I gave will buy in the next five years more new varieties than they have bought in all their preceding years. Yes, certainly, to destroy the surplus is much easier than to allot among all and sundry that would come.

Surely most of us have profited by the accurate, colorful descriptions and the suggestions for harmonious varietal combinations for which we are indebted to Mrs. Hires. Those who know her appreciate her kindly reticence in the face of negative ideas and defeatist attitudes no less than her enthusiasm for optimistic outlooks. It is not surprising to find that the varietal descriptions by such judges are valuable no less for what they leave unsaid by way of constructive notice what more to inquire about, than for their positive definitive statements.

But to acknowledge all of the cooperation and the courtesies that have been extended to me would be to list the names of all of the members who have written to me, all whom I have met, and in particular all by whom regional articles appear in the January issue. I can but thank them, each and every one.

Several regional members have had considerable serious trouble this year with root-rot,—in at least one case, with the so-called "mustard-seed rot," causes, remedies and preventatives for which, it is suggested, should be adequately discussed in the BULLETIN.

Elsewhere President Wister has mentioned the Iris pilgrimage by our regional members last May to the famous Iris Bowl in the garden on the estate of Mr. and Mrs. Horatio Gates Lloyd, of Haverford, Pa.; to Mr. Wister's own garden and to Mrs. J. Edgar Hires' garden of novelties and rare varieties. Mr. Wister

has described the Iris Bowl in detail. As far as I recall, however, no one, unfortunately, has described in print Mr. Wister's most educational planting scheme of all, or at least of most, of the good tall-bearded ones in sequence by colors after the manner of the spectrum. Nor have I yet seen any adequate printed reference to his tireless activity, unfailing courtesy, and long-suffering patience in serving our members individually and in advancing the interests of the Society.

J. C. NICHOLLS, *New York*

All the different kinds of Irises did well in 1933 but the season of bloom was ten days ahead of the usual time. That forced some desirable critics and counsellors to abandon their visits.

We never feel certain that our evaluation of an Iris as a one-year plant is accurate and just, and we turned in no ratings of such plants in 1933. Here are notes on some of those and on a few others with which we are familiar as mature plants. The comment on the young plants is tentative.

First; young plants only. Alchemy was disappointing but the plant was rather weak. Alta California was far better than reports had led us to anticipate; tall, large enough, good shape and substance, high but nicely branched; it was a fairly deep, clear yellow self, though the sulphur undertone could be detected by close inspection; fertile in both directions. Chromylla, also on young plant, was not so impressive.

Blue Monarch and Ningal both appeared to be fine Irises but we wish to see them again on stronger plants. Claude Aureau was new to us and was one of the delightful surprises of the season; it is a blend of great charm. The other darker blend, El Tovar, seems to be up to the advance notices and we are anxious to see it on a strong plant.

Golden Light elicited enthusiastic praise from many visitors; so has the older Euphony—a well grown clump often has 40-inch stalks, wonderfully branched and bearing as many as seven perfect blooms open at a time. One of the best Sass originations. Dog Rose and Gilead both were nice but we expect to be able to say something better of them after next June. Persia is hardly as impressive as many others of Dr. Ayres, but is quite nice.

We have often been embarrassed by requests to recommend a

medium sized hardy white Iris; it is hoped that June Bride will live up to promise of last June and help answer such requests. Mabel Taft, a very nice one, has the largest roots and foliage we have seen. We were able to detect no faults in Red Dominion—fine in every way. Descriptions of Depute Nomblot had led us to anticipate something on the order of Red Dominion or Shirvan; we have had the Depute in strong growth for three years but the competition of other Irises of better color and stronger and better branched stalks has somewhat dimmed its reputation; however, its perfection of form and finish will make it go.

We scrutinize every Iris for potentialities as a parent; Spokane and its sisters, J. Sass Numbers 30-20 and 30-40, impressed us greatly in this connection. Spokane has worth as is but it would seem to be a fine lead towards redder Irises. Number 30-40 has even better color but its standards are weak.

Really clear white Irises of height and size are scarce and Venus de Milo appears to be a fine one. It is free from the blue undertone so common to most of this kind.

We will now mention some of the older Irises. Mary Geddes adds a new and beautiful effect in the garden and we expect its reputation to grow rather than diminish. Clara Noyes is subject to exactly the same comment, its color effect being a little different.

Coronation and Pluie d'Or are both splendid medium sized yellow Irises sufficiently different to avoid conflict. Pluie d'Or is probably a 24 chromosome kind with the size limitations in accord. Coronation is a triploid with 36 chromosomes, unexpectedly fertile in both directions, and offers some probability of larger yellow offspring.

Louisiana Irises. For four years now, all the wild Irises collected in Louisiana have thriven and bloomed without any winter protection. They appear to do equally well on sharp, well drained side-hill or on low and level ground. The only special treatment we give them is to work three inches of shredded peat-moss into the soil. They make rapid lateral growth and this must be considered. Also, lacking the unlimited soil fertility of their native habitat, they exhaust a site in about three years and begin to "peter out." Both the spreading and the weakening can be obviated by transplanting every two or, at most, three years. Their foliage attempts to persist through the winter and that leads to an occasional shoot rotting in spring.

They are expected to find a place in our gardens. Their color range is even wider than that of the bearded Iris: yellow, white, pinkish, deepest blue purple, pale purple, slaty gray, indigo, blends of many kinds and rather close approaches to blue and red. No plicatas. Two crimson ones have bloomed at odd times throughout the summer, once as late as October 15. Chromosome determinations indicate that they will probably all cross in their own group but not with *shrevei* nor *versicolor*. Neither should *shrevei* cross with *versicolor* but that can be definitely confirmed by trial only.

Shrevei, *carolina* and the Indiana *virginica* all appear to be one and the same species. They are perfectly hardy and can probably fight their way in the open meadows of this harsh climate. Their luxuriant forty-inch foliage is the most ornamental of any Iris. The young shoots of several of them are beautifully colored in spring, metallic violets and purples. Among those collected in Louisiana, Alabama, Georgia and South Carolina are clear whites, bright rose, pale lilac, darker lilac and white, flushed blue. Most of them are small but one or two are fairly large. Some of these will take their places in our gardens without question.

MRS. GROSS R. SCRUGGS, *Texas*

How one thrills with pride and satisfaction on discovering a plant or group of plants that prove a perennial joy—dependable things whose pageant of bloom make the garden a riot of beauty! Season after season they come to us, and assurance becomes doubly sure that this is a plant entirely adaptable to all local climatic conditions, when the Weather Man capriciously produces every extreme variation of temperature, and that plant whose virtues we had so lavishly praised becomes but a crushing disappointment.

So runs the history of Iris in the Southwest!

After boasting for seasons that the one ideal plant *had* been discovered—two springs ago a severe cold spell in the fall caused a disappointing season of bloom, followed the next year by an unprecedented cold in late January (that had been preceded by days of spring-time, balmy temperature) which ruthlessly cut to the ground shrubs and plants alike. The early-blooming varieties of

the Iris suffered in this destruction, and few blossomed. So, *two seasons* of disappointment must be reported for Iris, reckoning all types in the complete tally.

Yet the story of the Iris season in the Southwest is not all a gloomy one, for happily the mid-season and later varieties, whose blossoms are possibly the most gorgeous of the year, were only injured in a limited way; rather strange, perhaps, as shown by the *large* blossoms of *very* short stems, and other unusual characteristics.

Taken as a whole even this queer season did not dampen the ardor of Iris enthusiasts, for the coming season is already being anticipated with breathless interest, augmented perhaps by a few early spring-blooming varieties that are blooming now, at Christmas-time, out of season—for, so far, no one has reported having any blossoms on the fall-blooming varieties.

Few Iris Shows were held last spring, as the condition of the plants was so abnormal. The fact that the same varieties were not affected alike at different locations makes it rather interesting to speculate on what part the soil and cultural conditions have had in building up resistance to sudden cold, or whether those vagaries we have had were due entirely to location of planting and exposure.

Those persons familiar with the history of Iris breeding will readily understand why Freda and Wm. Mohr and Santa Barbara suffered so terribly, while Purissima was practically destroyed in every instance. San Francisco and Mauna Lou had no blossoms at all. Los Angeles, perhaps, came nearest being normal and was the most satisfactory of all the varieties from the Pacific Coast.

The glory of the year was centered around the old, tried varieties of the North (such as Seminole, Georgia, Quaker Lady, Sherwin Wright, etc.)—while the best of the newer ones included Duke of York, Jacqueline Guillot, Mrs. Marion Cran, Midgard, Nusku, Rose Marie, Indian Chief, Dauntless and almost all of the Williamson introductions, while Asia surpassed them all! Coronation with its imperfect blooms was one of the disappointments, while Plue d'Or seemed affected not at all.

REPORT OF THE SCIENTIFIC COMMITTEE

DR. A. E. WALLER, *Ohio*

■ The American Iris Society is fortunate in having among its members a small number of persons who either because of their professional interest, or botanical or horticultural investigations or because of their training and abilities and personal bent are eager to know a great deal more about irises than can be learned by enjoying their bloom in the garden. There has been in name a scientific committee consisting, however, of but one member. Our President has been most conservative in not appointing more members. However, he has been probably too tolerant in allowing the Society to consider that one individual—busy with other matters of daily routine—could really assume responsibility for the Society in this important work. It is true there have been several reports published in the BULLETIN under the heading of Scientific Studies. But these are only a start. Early in 1933 the following members agreed to serve: Mr. B. Y. Morrison, 116 Chestnut Street, Takoma Park, D. C.; Dr. E. O. Essig, College of Agriculture, University of California, Berkeley; Dr. George M. Reed, Brooklyn Botanic Garden; with Dr. A. E. Waller, Ohio State University, as Chairman. This present set up of a committee desires in every possible way to further the important work of keeping records in all the fields that contribute to our knowledge of the genus *Iris*. It should be clear that the number of members as well as the personnel of the committee should by action of the committee with the approval of the Directors of the Iris Society be changed from time to time and that a plan for several years of work should be projected before final reports are to be expected. A committee engaged in research has the eventual opportunity, if the right persons can be contacted, to report on every type of iris that exists. Consequently the individual members of the Committee are alert to all items of interest that come to their attention. In addition suggestions and advice from the Society as a whole are wanted.

What are some of the projects that the committee visualizes? In the first place, who is willing to step forward with a plan for accurate identification? For example are the members at large concerned over the question of species? Do they know that the newest edition of the Flora of the Southeastern U. S. contains a

list of some ninety odd new species of Iris? That many of these are from a single locality and that some of them are limited to a single type specimen? Will these species hold their identity in the years to come? Or are they simply hybrid segregates comparable to the numerous varieties in our gardens? A deadly silence greeted the announcement of all of these new names. Are they to remain ignored? In the same publication, *Iris cristata* is apparently to be separated from the four or five oriental species to which it is closely related and along with *I. verna* placed into a new genus—not Iris. The reasons for making such a change would not interest the members of the Society. Here is where some concerted action would seem desirable. Varieties are named through committee action, why not species?

Iris breeding problems lead directly to the subject of greatest interest to commercial growers eager for new varieties as well as to some fortunate amateurs who have successfully produced new forms. Back of this is the necessary fundamental research on heredity in Iris. There cannot be said to have been any scientific breeding in the production of most of our garden irises. Most of them have been obtained by mating varieties that looked good or were available to the breeder. There have been a limited number of species crosses. The resulting hybrids have been propagated, but only recently have any attempts been made to follow up this work by crossing the hybrids back to their parents or by selfing the hybrids or making further crosses among these hybrids. The notable success that has followed crossing of the pallida, variegata and Eastern Mediterranean groups of tall bearded irises is worthy of trial among other species. One member of the committee is already at work on the foliosa-fulva crosses. But whether completed by the committee or not, the interesting records should be made available to all who are engaged in iris breeding.

Breeding work is more and more depending upon chromosome studies to help unravel its problems. This is not work which the commercial grower can undertake, though I am certain that a knowledge of the genetics of iris would be valuable in the long run to all iris breeders. The projects of chromosome investigation should be regarded as a challenge to the Society as a whole if it professes a genuine interest in how new types may be created. In France Simonet has undertaken to count chromosomes of a number of species.

Problems of seed germination constitute a frequent question in my correspondence with several members. It only arises as an important question in the introduction of new species or in the question of producing seeds from difficult crosses. Few growers have records of percentage of seed germination.

The responses of iris to light, to soils, to water, are all problems that would throw a great deal of information open to the growers of irises everywhere who want to know why in one garden a particular iris flourishes whereas in another it languishes or it has a very different appearance.

Growth and behavior studies in many plants furnish suggestive materials for use in studying iris problems. In the Ohio State University Botanic Garden, the bulbous species *Iris histrioides* set seeds last year. I was informed by the Van Tubergen Nursery of Haarlem, Holland, that it does not set seeds in their country. Through the generosity of the Columbus Iris Society a group of the various bulbous irises is being accumulated in the Ohio State Botanic Garden.

From Mr. E. O. Essig of the Committee a list of irises that grow in California is submitted. Mr. B. Y. Morrison has promised a similar list from his locality. Mr. Reed has a number of Japanese irises as well as hybrids of the foliosa-fulva groups. In conclusion I would like to refer the reader to a file of the BULLETIN of the Iris Society for a presentation of the work of the research committee as represented by the series of science studies.

Gaiser, L. O. 1926—Chromosome numbers in Angiosperms. I. *Genetica* 8: 401-84.

———. 1930. Chromosome numbers in Angiosperms. II. *Bibliographia Genetica* VI. 171-466.

———. 1931. Chromosome numbers in Angiosperms. III. *Genetica* 12: 161-260.

Tischler, G. Pflanzliche Chromosomen-Zahlen Sonderabdruck aus Band I (—Tabulae Biologicae Bd. VII). (1931.)

IRIS SPECIES GROWING IN CALIFORNIA

As Noted by E. O. Essig

■ *Hermodactylus tuberosus*.

Is hardy in California. If not disturbed it will remain for years in the same spot without spreading to any extent. It blooms

at Berkeley the last of February and dies down in the summer. It is an obscure, but attractive species.

Iris tingitana Boissier and Reuter. A fine large flowering form which does well in California. It begins to bloom about the middle of February and will maintain itself in the garden for several years.

Iris xiphium Linnaeus and *I. xiphiodes* Ehrhart, grow well with special care. In the garden they run out in California in two or three years. If new bulbs are planted every year they can be expected to flower well.

Iris japonica Thunberg. (Peacock iris.)

This species is perfectly hardy in the San Francisco Bay region, but requires shade and considerable water and manure. It blooms in March and maintains itself in the garden for years.

Iris wattii Baker.

This has been observed at Redlands, Calif., in the garden of S. S. Berry, where it seemed to be as much at home as *I. japonica*.

Iris cristata Solander.

I have been growing plants of this species in my garden at Berkeley for 10 years, but so far have not seen a single flower. Perhaps it is not properly located as to shade and moisture.

Iris dichotoma Pallas.

Plants received from the Bureau of Plant Industry, U. S. Department of Agriculture, bloomed for two successive years and died. By rearing seedlings every year it can be maintained with ease, but because of the ephemeral flowers it is of little interest and value, except as a novelty.

Iris sibirica Linnaeus.

Perfectly hardy and fine in California and may be raised in water or on fairly dry land. They do very well planted about lawns where they secure plenty of moisture.

Iris graminea Linnaeus.

I have seen this growing nicely in the gardens of E. O. James, Oakland, California. It is a beautiful little species.

Iris aurea Lindley, *I. ochroleuca* Linn., *I. monnieri* de Caud., and *I. spuria* Linn.

All grow to perfection in California. As a matter of fact they are so tall and vigorous as to be undesirable in many gardens. Many hybrids have been obtained from crossing them.

CALIFORNIA IRISES:

Iris longipetala Herbert.

Iris douglasiana Nutt.

Iris macrosiphon Torr.

All grow well in damp places, either in shade or in full sun in the lowlands and Coast range mountains, particularly in central and northern California. They are commonly cultivated.

Iris missouriensis Nutt.

Iris hartwegii Baker.

Are to be found in the Sierra Nevada Mountains, but I have never seen either in cultivation, although they would probably succeed well in many parts of California.

Iris tenax Douglas is native to Oregon and Washington, but is commonly seen in cultivation in the San Francisco Bay Region of California. It is one of the finest of the native western species.

Iris fulva Ker-Gawler is hardy in most parts of California and I am growing it in the water and on dry land, but it is always small. Some hybrids are much more satisfactory.

Iris hexagona Walter is a rampant grower in shade and sun if given sufficient water. Its requirements appear to be about the same as for Japanese irises.

JAPANESE IRISES:

Iris kaempferi and *I. laevigata* perhaps do not do so well in California as in the East. However, if planted in wet places they are excellent. The flowers burn in the hot sun of the interior valleys of California, but along the coast, when there is not too much summer fog, they are fine.

Iris pseudacorus Linn. grows out of bounds in California. I raised plants six feet tall in my pool and had to take them out to prevent them choking everything else. On dry land, with frequent watering, this species is quite satisfactory, but is not much favored.

Iris foetidissima Linnaeus is grown commercially in this region for the seed pods, which are common in all florists' shops in early winter. It is undesirable in the small garden and requires hand pollination to get the best results in seed production.

Iris unguicularis Poiret (*I. stylosa*) does exceptionally well in many parts of California and blooms from October to March or even later.

Oncocyclus irises. Practically all the known species have been grown in California. None of them can be said to be thoroughly satisfactory although for a season or two they may do fairly well. *Iris susiana* Linn. is not uncommon. They do better in the southern part of the state.

Regelia irises are a little more satisfactory than the *Oncocyclus*, but are far from hardy. *Iris hoogiana* Dykes is perhaps the best one in the San Francisco Bay Region, but *I. korolkowi* Regel and *I. stolonifera* Max. are fair. Their hybrids with pogonirises do very well in California. They are much better in the southern part of the state.

POGONIRISES:

The following species are commonly grown and do very well in California:

Iris pumila Linn.

Iris pallida Lamareck.

Iris albicans Lange.

Iris kashmiriana Baker.

Iris trojana Kerner.

Iris germanica Linn. and *I. kochi* Kerner.

Iris cypriana Baker and Foster.

Iris mesopotamica Dykes.

Iris variegata Linn. is not as hardy as the others named.

REPORT OF COMMITTEE ON DISPLAY GARDENS

THE PLAINFIELD GARDEN CLUB IRIS GARDEN, NOV. 8TH, 1933

■ In several ways our work during this year, and therefore our report for this year, resembles that of last year. It has been another year of designing and digging new beds, acquiring plants in quantity, receiving most generous gifts, and having most remarkable cooperation.

Early in the spring we greatly enlarged two and added two more large beds for Japanese varieties, down by the playground and the Southwest corner by the rustic bridge; more than doubled the size of the bed of species; and added one huge one for the *Pogocyclus*, up on the plateau among the tall-bearded varieties. For the summer, we designed and prepared another large bed (on top of the plateau) for yellow tall-bearded varieties; and one on the Northwest corner, by the rustic bridge, for early and fall-blooming varieties—a most excellent place, especially for the latter—as we wanted to have some of those in a location both advantageous to that type and easily enjoyed by us. Late this fall—last week, in fact—we added another very graceful bed to the section of iris species.

In those beds prepared early in the spring we placed 43 named and 185 unnamed (228 plants) varieties of Japanese Iris, 9 (96 plants) of species, and 11 varieties (89 plants) of *Pogocyclus* Iris—a total of 423 plants, all of which (except 15 which we bought, at a bargain, from Mrs. Cleveland) came through Dr. Reed from the Brooklyn Botanic Garden.

In July and August we added 30 more Japanese Iris—20 of them very valuable ones—and 7 more varieties (122 plants) of *Pogocyclus*, all of which were generous gifts from Dr. Reed. We more than filled the beds prepared for all kinds of the Bearded Iris—Tall-bearded, Intermediate, Dwarf, and Fall-blooming—with 112 varieties (271 plants), added 3 Species (3 plants), and 2 Siberian (2 plants). A few of these (5 varieties—25 plants) came from the Chairman's garden (as did 25 to 50 more for re-

placements and to increase stock of certain varieties), a \$5 purchase produced a \$25 value from a commercial grower (Mr. Sass), and all the rest, an exceptionally valuable lot, came through Mrs. Peckham from the New York Botanical Garden (Bronx).

Our late fall acquisitions were a handsome Japanese plant from Mrs. Atterbury, and, last week, 9 more (56 plants) Iris Species from Dr. Reed—which just fill the new bed.

One of the most interesting and most unusual features of our Iris Garden is the development of the section of Species of which we now have a total of 23 (247 plants), nearly all of them native. As we had only one last year, this line might well be called one of the new ventures of this year. There are two others; the Pogocyclis is one of them. This type, a cross between the regular bearded and the more exotic ones, is more exacting in its care, but well pays for it with its exquisite, though not spectacular, flowers. Having had excellent samples even this first year, we expect our 18 varieties (215 plants) to give us a feast next year. The other is the Fall-blooming (bearded) of which there have been a few developed through hybridization among the Tall, the Intermediate, and the Dwarf-bearded varieties. These are our newest venture and we have acquired 19 varieties (21 plants). Two are in bloom now—Autumn King and October Frost. (Some other names are charming also—Golden Harvest, September Skies.) Next fall we should have a sizeable group of bloom stalks.

In two ways this year's report does *not* resemble last year's. We have had to study the blooms to be sure they were correctly labelled and correctly placed. Most of the plants—being so small and so newly set—did not bloom; but of those which did, although far the greater part were correct in name and location, some were incorrectly labelled, and many had to be moved. The other difference is the beginning of distribution. We have had to give away 80 plants (parts of 7 varieties), duplicates, of course, because we had too many of those kinds. They went to our other civic plantings (through Mrs. Devlin) and to the Park Commission for use in other parts of the system. (Plants given to us by the American Iris Society through botanical gardens, and those *given* by commercial growers cannot be sold.) Chairman has complete record of every variety.

As annual reports seem always to call for figures, this year's totals and the complete totals of both years follow:

<i>Types</i>	<i>Named</i>	<i>Unnamed</i>	<i>1933 Varieties</i>	<i>Totals Plants</i>	<i>Totals Varieties</i>	<i>Both Years Plants</i>
Japanese ----	64	210 =	274	274	470	537
Siberian -----	2	----- =	2	2	27	159
Orientalis ----	----	----- =	----	-----	1	21
Species -----	21	----- =	21	155	23	247
Crested -----	----	----- =	----	-----	3	10
Pogocyclus ..	18	----- =	18	215	18	215
Bearded -----	112	----- =	112	271	353	3,172
Totals -----			427	967	895	4,361
Given away-----						80
						4,281

Bearded Types:

	<i>Named</i>	<i>Varieties</i>	<i>Plants</i>
Tall -----	48	49	147
Intermediate -----	35	35	92
Dwarf -----	9	9	10
Fall-blooming -----	19	19	21
(As above)-----		112	271

<i>Definitely Named</i>	<i>Unnamed Varieties</i>	<i>Plants</i>
1932 --- 298	170 = 468	3,394
1933 --- 217	210 = 427	967
515	380 = 895	4,361 — 80 = 4,281

Annual Reports also always seem to call for a forward look, so that also follows: Both last year and this we omitted the making of a bed which was not needed, and so next spring the Park Commission intends to make that and to extend two others (now badly needed)—all as specified in the original plan. In addition to the comparatively small matter of filling these new vacancies, the committee will have two lines of work. The first—more important than enjoyable—will be the continual warfare (preventative and curative) on the Iris Borer, and the almost as continual checking up of the correct labellings of the five hundred varieties,

identifying them as they bloom, and keeping them or putting them in the right color beds. The second—and more interesting—will be the effort to continue to secure more and more of the newer and better varieties. The day of *acquisition* of *quantity* is now over and the time has come when the *number* of plants of the commonplace varieties (which were set closely for immediate color effect) must give a large part of their space to those which are newer and more choice. Any one can easily choose Bearded Iris—the catalogs are so numerous and so full—but it is not so easy to get at the *best* of the Japanese and the Siberian, and it is truly difficult to decide about varieties of Crested, Pogocyclus, Species, Spurias, et. al. This feature of the work—the *maintaining* of a *high standard of quality* among *all types*—calls for constant study, both intensive and extensive, and it is absolutely necessary if the Garden is to fulfill its two-fold purpose of beauty and education.

Before closing, we must again record remarkable cooperation. Mrs. Conner and Mrs. Dudley Barrows have again given their aid with cordial promptness—but it has not been necessary this year to ask for much from individual members. The Club's various expressions of appreciation have been a form of cooperation which was most heartening. The understanding, constructive cooperation of Mrs. Peckham and Dr. Reed have been invaluable for, in addition to everything else, they "said it with flowers (plants)". Again, as last year, the cooperation of the Park Commission from highest official to least workman, has been almost beyond belief. Everything asked for has been done or supplied, willingly and immediately, and more offered. It would be impossible to list it all, but one thing—the crown of the year's work—must be mentioned. A water pipe is to be laid from the field house to the west side of the open ditch, so that the beds of Japanese and of Species may be flooded at the correct times. This is the climax of the year's cooperation, and of our year's work.

HARRIETTE R. HALLOWAY, *Chairman.*

REPORT OF IRIS SHOWS HELD IN 1933

MRS. W. L. KARCHER, ILL., *Chairman*

BALA-CYNWYD, PENNA.

We had the pleasure of cooperation and extending a wee bit of help to the Bala-Cynwyd Garden Club on their Iris Show of June 7th.

A membership in the A. I. S. was won by Mrs. M. A. Laverty, of Merion, Penna.



BOSTON, MASS.

The New England show of the A. I. S. was held in Boston, June 7-8, and proved to be one of the most interesting exhibitions ever held there. The Silver Medal of the A. I. S. offered to the winner of the highest number of points in the single classes was won by T. F. Donahue of Newton Lower Falls, Mass., and the Bronze Medal for the winner of second place was awarded to Wm. J. McKee, of Worcester, Mass.



CHULA VISTA, CALIF.

The first Iris Show of the season was held in Chula Vista, April 16-17. The show dates hit a majority of the gardens wrong, as many fine collections were not at their best blooming period; however, the quality of the flowers shown was excellent, and quoting the Judge, Mrs. Lena M. Lothrop, "the length of stem and size of bloom was unusual for Southern California."

It is interesting to note that many of the finest stalks exhibited were from plants set last July.

The Bronze Medal of the A. I. S. was awarded Mr. John A. Monroe, of Chula Vista, as winner of the greatest number of points in all Iris classes.

The A. I. S. membership offered in Group 3 was awarded to Mrs. Mary D. Myer, of Chula Vista.

COLUMBUS, OHIO

The Columbus Iris Society held their tenth annual Iris Show, May 27-28, in the Archaeological and Historical Museum on the campus of the Ohio State University with Dr. J. H. Arbuckle as manager.

Due to weather conditions the quantity of iris was not so large, but about 55 exhibitors contributed irises with other perennials which made a splendid showing.

Mrs. E. A. Peckham and Dr. Waller were the Judges.

One feature of the show which was much enjoyed, was an illustrated lecture on varieties of beardless irises given by Dr. A. E. Waller in the Auditorium adjoining the show rooms.

The Silver Medal offered by the A. I. S. was won by Mrs. E. H. Bretschneider, the Bronze for second place by Mrs. J. H. Arbuckle.



DULUTH, MINN.

Duluth Peony and Iris Society held a very good Iris Show. From the report of the chairman, Mrs. Schlaman, "it was a decided success in spite of a most erratic season. We had an abundance of good bloom, and many interested visitors who were very enthusiastic in their praise of our efforts."

The Bronze Medal of the A. I. S. was awarded to Mrs. J. B. Finch. The A. I. S. membership to Mrs. Carl Christensen.



FARGO, NORTH DAKOTA

The Fargo Garden Society presented their first Iris Show in cooperation with the A. I. S., June 6-7.

Although they have been sponsoring Iris Shows for several years the A. I. S. has never had the pleasure of working with them before.

Judging from the number of activities listed on their yearly program, such as an Iris Show, Peony Show, Fall Garden Show, Yard and Garden contest and a Christmas Lighting contest, I am convinced that this is a Garden Club well worth knowing and I am hoping to have the pleasure of attending their next show. The Bronze Medal of the A. I. S. was won by W. H. Magill, South Fargo, North Dakota.

FREEPORT, ILL.

The Freeport Garden Club held their annual Iris Show in conjunction with the annual meeting of the American Iris Society, June 3-4.

The attendance was very good—19 states being well represented. Having experienced every brand of cussed weather capped off with three of the hottest, dryest days on record previous to the opening of the show, many fine things were past their best bloom.

The Silver Medal for sweepstakes in the amateur classes was won by O. E. Heard, Jr. Honors for best specimen in this class went to a beautiful stalk of San Francisco, exhibited by Mr. Heard. The Bronze Medal, sweepstakes in the commercial class, was awarded to Mr. C. A. Sherman for a very outstanding exhibit; best specimen in this class proved to be a fine stalk of Baldwin exhibited by C. A. Sherman.

Mrs. Douglas Pattison's non-competitive exhibit was the recipient of much well deserved praise. Whatever success Freeport Iris exhibitions may have attained—the many fine collections that are owned by residents of this community are all easily traced back to the discriminating influence of this connoisseur of fine irises.



LINCOLN, NEBR.

The Lincoln Iris Show held May 27-28, was a very fine display of good material, very well shown with 139 exhibitors and 350 entries in the Iris classes. The entire exhibition showed a marked improvement over all previous shows.

The Silver Medal of the A. I. S. was won by Mrs. C. C. Wiggins, the Bronze Medal for second place by Miss Marjorie Bernstein and the A. I. S. membership was awarded to Mrs. W. F. Day. All the winners of honors were from Lincoln.



NEW HAVEN, CONN.

The New Haven Garden Club staged a very successful Iris Show on June 7th.

Miss Theodora Van Name, whose exhibits were exceptionally fine, was winner of the Silver Medal of the A. I. S.

Much enthusiasm was shown by the exhibitors, who are already making plans to surpass all previous efforts next year.



NIAGARA FALLS, N. Y.

Niagara Falls Garden Club sponsored their first Iris Show on June 3-4 under the direction of Frederick L. Koethen, with the cooperation of the A. I. S.; many fine non-competitive exhibits were made by residents of the district of Niagara Falls, adding greatly to the good display made by the members of the club.

Their first effort proving so successful we shall look forward eagerly to Niagara Falls' second annual Iris Show.

The Bronze Medal offered by the A. I. S. was awarded to Miss H. May Brown.



ST. JOSEPH, MO.

St. Joseph staged their second annual Iris Show, May 20-21, with a good increase in all entries, and many fine specimen Irises. Majestic, with six open flowers and seven buds, was given the award for the best specimen in the show.

Sweepstakes Silver Medal of the A. I. S. was won by Chas. F. Wilburn of Saint Joseph. The Bronze Medal for second place was awarded to Mrs. W. V. Thomas of Leavenworth, Kans., and the A. I. S. membership offered in Group 3 went to Mrs. Frank Davis of Saint Joseph.



SAN BERNARDINO, CALIF.

This year the Iris Show was sponsored by the San Bernardino Horticulture Society, and was held in the green room of the California Hotel.

The exhibits were very good and the quality up to the usual high standard.

The Bronze Medal of the A. I. S., offered as sweepstakes, was won by Dr. F. F. Williams, and the A. I. S. membership by Mrs. H. E. Stewart. Both are residents of San Bernardino.

SAN DIEGO, CALIF.

San Diego Iris Show was held April 22nd with the usual fine exhibits of Iris. Many of the finest things shown were not in competition. The Bronze Medal of the A. I. S., given for sweepstakes, was won by Mrs. E. W. Meise of Encanto, and the A. I. S. membership was awarded to Mr. B. D. Miller, of Chula Vista.

Much credit is due Mrs. U. V. Tuttle for the success of this Show, and for her untiring efforts in promoting and fostering a love for Irises in her community.



SIOUX CITY, IOWA

The Garden Club of Sioux City staged one of the finest shows of the 1933 list on May 31st-June 1st under the able direction of Mrs. Ralph E. Ricker, assisted by Mr. W. S. Snyder, general chairman of Sioux City Flower Shows.

For eight years they have been putting on annual exhibitions and it is most gratifying to find an organization that are so enthusiastic and so united in their efforts.

The winner of the Silver Medal of the A. I. S. in the amateur classes was Mr. B. N. Stephenson; Mrs. E. C. Currier won honors in the amateur class for the best specimen iris in the show, with a beautiful stalk of Los Angeles. The A. I. S. membership was awarded to W. H. Radschlag.

In the commercial classes W. S. Snyder was the sweepstakes winner, and was awarded the Bronze Medal of the A. I. S., as well as first place for the best specimen in the commercial class, with a glorified stalk of San Francisco.



WASHINGTON, D. C.

The National Capital Dahlia and Iris Society held their Iris Show May 24-25.

Individual entries ranged from one specimen to displays of more than six hundred named varieties. Garden Clubs from the District, Maryland, and Virginia put on some very attractive exhibits in competition.

Howard R. Watkins, of Somerset, Md., was awarded the Silver Medal of the A. I. S. As winner of the most points in the Iris

Classes, W. T. Simmons, received the Bronze Medal awarded for second place.

Recommendation for honorable mention was given to a seedling shown by W. T. Simmons.

The Judges made special mention of a very outstanding non-competitive educational exhibit presented by Dr. E. A. Sheets, which consisted of more than 600 varieties of irises, including many new varieties from European and American hybridizers never before exhibited at a Washington flower show.



THE NEW CLASSIFICATION FOR BEARDED IRIS

■ The dwarf, intermediate and tall bearded types are now classified according to height instead of season of bloom to fix the type, but the season for each type is to be noted by the addition of the letters EE, E, EM, M, MF, F and FF, for extra early, early, early to midseason, midseason, midseason to late, late and very late to fall blooming. This will enable the dwarf bearded section to take in all former so-called intermediates and tall bearded varieties of a height under eighteen inches, and the intermediates all former tall bearded of a height between eighteen and twenty-nine inches, reserving for the tall bearded section only those attaining a height of twenty-nine inches or more—this section will then include some of the newer intermediates by season, which attain a height of similar proportions.

BREEDERS IN FUTURE WHEN SUBMITTING VARIETIES FOR REGISTRATION WILL THEREFOR INDICATE THE EXACT HEIGHT, THE BLOOMING SEASON AND DESCRIBE THE FRAGRANCE OF THE BLOOMS.

WHEN SUBMITTING PARENTAGE DATA, please give the pod-parent first. IF pod-parent is an unnamed plant indicate this by a blank. Pollen-parent is always last.

A full list of fragrance descriptions classified in groups according to strength, quality, etc., is in preparation and will be published before long.

REGISTRATIONS FOR 1933

No person other than the originator may register a seedling unless permission in writing from the breeder to make such registration has been granted and *said* letter filed with the Chairman of the Registration Committee at the time such registration is requested.

The closing date for registrations to be received for publication in the January BULLETIN or Special BULLETIN following, is August 1. Any received after that date will be treated as registrations of the following year.

UNDER NO CONSIDERATION WILL NAMES ALONE BE APPROVED OR REGISTERED. THESE MUST BE ACCOMPANIED BY DETAIL DESCRIPTIONS AS TO TYPE, COLOR, SEASON OF BLOOM, FRAGRANCE AND ITS QUALITY, AND PARENTAGE IF AVAILABLE. REGISTRANTS WILL PROVE HELPFUL TO THE SOCIETY AND ITS REGISTRAR BY SUPPLYING THE NECESSARY DATA IN FULL AT FIRST WRITING, AND TO SUBMIT ALTERNATIVE NAMES IN CASE THE PREFERRED ONE IS NOT AVAILABLE.

IT is also to be UNDERSTOOD that registration or approval of a variety is made subject to the contingency of an older variety of the same or closely similar name coming to light soon after the current registration or approval, in which case a new approvable name must be submitted, when requested.

The new species of Dr. Small and Mr. Alexander are all natives of Louisiana and represent many pronounced differences. The group names are new, tentative ones, given to make a working basis, and may be changed.



ADDITIONS TO LIST OF BREEDERS AND INTRODUCERS

- Baker—S. H.—S. Houston Baker 3rd, Denman Rd., Cranford, N. J.
Barker—M. R.—Mrs. Mabel R. Barker, Motor Route C, Dallas, Texas.
Borsch—Wm. Borsch & Son, Maplewood, Ore.
Cahoon—Wm. F. Cahoon, 1130 11th Ave., S., Birmingham, Ala.
Creamer—Mrs. Lily M. Creamer, 25 Seaton Pl. N. E., Washington, D. C.
Dennett—Mr. Dennett, Hillside Gardens, Estes St., Amesbury, Mass.
Elder.—J. G. Eldering & Co., Overveen, Haarlem, Holland.
Friend—Grace L. (Mrs. John W.) Friend, Petersburg, Va.
Graham—G. H. Graham, 4410 Judson, Lincoln, Nebr.
Graham—S.—Sam L. Graham, Rome, Floyd Co., Ga.
Handle.—Robert H. Handleman, White Plains, N. Y.

Jen.—Mrs. Marjorie S. Jennings, 397 Longmeadow St., Longmeadow, Mass.
 Kingsley—W. H. Kingsley, Eden Glad Gardens, Hayward, Calif.
 Long—J. D.—J. D. Long, Boulder, Colo.
 McDade—Clint McDade, Chattanooga, Tenn.
 National—National Iris Gardens (formerly H. E. Weed), Beaverton, Ore.
 Nies—Eric E. Nies, 1423 N. Kingsley Drive., Los Angeles, Calif.
 Pearce—Rex D. Pearce, Merchantville, N. J.
 Pitysm.—Pitysmont Nurseries (Miss Cicely C. Browne), Box 5275, Raleigh, N. C.
 Reibold—F. E. Reibold, 1395 Linda Vista Ave., Pasadena, Calif.
 Rhein.—John C. Rheinhardt, 2006 Fifth Ave., Evansville, Ind.
 Smi.—James Smith, 215 Elm Ave., Rahway, N. J.
 Smi.—W. J.—Wm. J. Smith, 739 Church St., Millersburg, Pa.
 Snow—Euclid Snow, R. F. D. No. 2, Hinsdale, Ill.

- ABELARD. IB-E-S6 (Sass-H.P. N.); (Eldorado colored *pumila* x).
- AIBONITA. Sib-EM-B7L (Gers. N.); (PERRY BLUE x BLUE KING).
- ALEMENE. Sib-EM-B7M (Gers. N.); (PERRY BLUE x BLUE KING).
- ALKINAH. TB-M-B1M (Creamer 1933); (SHEKINAH x ALCAZAR).
- AMIGO. TB-M-B9D (Wmsn. N.); slightly ☐.
- ANNIE CADIE. TB-F-Y4M (Wash.; Nes. N.); slightly ☐.
- ARIETTA. TB-M-R9M (Gers. N.); (SARABAND x SEMINOLE); slightly ☐.
- ARZILLO. TB-M-R9L (Gers. N.); (SARABAND x SEMINOLE).
- AT DAWNING. TB-M-S7L (Kirk. N.); (from two red seedlings); ☐.
- ATTYEE EUGENIA. TB-M-Y4L (Snow N.); ☐.
- AUGUST FLAME. Fulv-FF-R7M (Nic.-Jr. 1933); Nic.-Jr. 1933.
- AUTUMN DAWN. IB-EE-FF-S7M (Nies N.); (DELICATISSIMA x) x (SWEET LAVENDER x MARY GIBSON); intensely ☐.
- AUTUMN FIRE. Fulv-FF-R7M (Nic.-Jr. 1933); Nic.-Jr. 1933.
- AVONDALE. TB-M-R7D (Sass-H. P. N.); (..... x RAMESES).
- AZURE DARKNESS. Sib-EM-B9D rev. (Gers. N.); (PERRY BLUE x BLUE KING).
- BALBANCHIA. Fulv-Hex-B7M (Wash. N.).
- BALROUDOUR. DMB-E-S3L rev. (Sass-J. 1933); Sass-J. 1933; Sass-H.P. 1933; (yellow seedling of (*pumila* x) x (*regelia-cyclus* var. BEATRIX)).
- BARBARIAN. TB-M-B7D (Wmsn. N.); flower almost laciniated; ☐.
- BAREENA. Sib-M-B9D rev. (Gers. N.); (PERRY BLUE x BLUE KING).
- BARIRA. TB-S3M (Cay. N.); C. M., S. N. H. F., 1933; Rev. Hort. 105: 413, 16 June 1933.
- BAYOU BARATARIA. Hex-radicristatae-MF-B1L (Nic.-Jr. 1932); *Giganticoerulea* var. *China Blue*.
- BAYOU SAVAGE. Hex-MF-B7M Nic.-Jr. 1933); Nic.-Jr. 1933.
- BERTHA DOROTHEA. TB-M-S6D (Gers. N.); (CHASSEUR x MILDRED PRESBY); ☐.
- BETTY NESMITH. TB-M-Y4D (Wash.; Nes. N.); slightly ☐.
- BILOXI. Hex-radicristatae-MF-W2L (Nic.-Jr. 1933); Nic.-Jr. 1933.
- BLACK BIRD. DB-E-B7D (Way. N.).

- BLANC MIGNON. Jap-Dbl-1 (Nes. 1933); Nes. 1933.
- BLUE CUP. Sib-MF-B7D (Gers. N.); (BLUE KING x PERRY BLUE).
- BLUE MARBLE. IB-M-B1M (Kirk. N.); □.
- BLUE MONARCH. TB-F-S1D (Sass-J. N.); □.
- BLUE TOPAZ. DMB-E-S3M (Sass-J. 1933); Sass-J. 1933; Sass-H. P. 1933; (regelio-cyclus var. BEATRIX) x (yellow seedling of (*pumila* x)).
- BLUSHING NYMPH. TB-F-R7L (Lap.-Gers. N.); (KALOS x DREAM); very sweetly □.
- BRIGHTNESS. DB-E-Y4M (Emig. 1933); Kenwood 1933.
- BROWN BETTY. TB-EM-S6D (White-C.G. N.); (MAUNA LOA x); slightly □.
- BRONZE GEM. DB-EE-Y7M (Fellows N.).
- BRONZE GLORY. TB-F-S9M (Sim. N.); (AMBASSADEUR x).
- BUNTING. TB-M-B1L (Wmsn. N.); table iris; slightly □.
- BURNING BRONZE. TB-MF-S7D Ayres N.); (SHERBERT x CARDINAL) x [(NANCY ORNE x DOMINION) x (LOUTE x **Mesopotamica**)].
- CALIFORNIA GOLD. TB-M-Y4D (Mohr-Mit. 1933); Salb. 1933; (GRACE STURTEVANT x cream seedling); □.
- CALINDA. TB-M-S4L (Reibold N.); (PLUMED KNIGHT x MME. CHERI).
- CASTALIA. TB-M-B1L (Wmsn. 1933); Long. 1933; (ORIFLAMME x); very □.
- CHAMITA. TB-M-S9L (Wmsn. N.); slightly □.
- CHARLES HARDEE. Laev-MF-B1D (Nic.-Jr. 1933); Nic.-Jr. 1933.
- CHEF MENTEUR. Vinic-MF-B7D (Nic.-Jr. 1933); Nic.-Jr. 1933.
- CHIPMUNK. TB-M-Y8D (Richer N.); □.
- CLABELYN. IB-M-R9M (Friend N.); slightly □.
- COOL WATERS. TB-EM-B1L (Wash.; Nes. N.); □.
- CORTEZ. TB-FF-Y9M (Nes. N.); (REVERIE x yellow seedling); □.
- CYRUS THE GREAT. TB-E-B7D (Kirk. N.); (..... x ANDREW JACKSON).
- DARK DAWN. Sib-EM-B1D (Gers. N.); (PERRY BLUE x BLUE KING).
- DARK MORASS. Hex-Fulv-MF-S1D Nies N.); (HEXAGONA PURPUREA, Dean, x *fulva*) x (HEXAGONA PURPUREA, Dean, x *fulva*) through three generations.
- DAWNAVA. TB-M-S7M (Creamer 1933); Creamer 1933; (DAWN x NAVAJO); slightly □.
- DAWNING DAY. TB-EM-S7L (Wash.; Nes. N.); □.
- DEKAY. TB-F-R7L (Lap.-Gers. N.); (KALOS x WILD ROSE).
- DELLA ROBBIA. Jap-Dbl-3 (Nes. 1933); Nes. 1933.
- DORCAS HUTCHESON. IB-M-FF-B7M (McDade N.); (AMAS x *pumila* hybrid); delightfully □.
- DRESDEN BLUE. Jap-Sgl-6 (Nes. 1933); Nes. 1933.
- EARLY BIRD. Sib-EE-B3L (Gers. N.); (PERRY BLUE x BLUE KING).
- EASTERN STAR. TB-E-W4L (Berry N.); (ARGENTINA x COLONIAL).
- ECHO. TB-M-R9L (Gers. N.); (SARABAND x SEMINOLE); sweetly □.
- ECLAT. TB-MF-S4M (Gage N.); (MARY GIBSON x yellow seedling); □.
- ELEANOR BLUE. TB-M-B1L (Salb. 1933); Salb. 1933; (large blue seedling x CARDINAL); agreeably □.
- ELEANOR ROOSEVELT. IB-M-FF-R1D (McDade N.); (AMAS x *pumila* hybrid); slightly □.

- ELIZABETH ANN. TB-M-S7L (Lap. N.); (MIDGARD x APHRODITE); pleasingly □.
- ENAMORADA. TB-M-R9L (Gers. N.); (SARABAND x SEMINOLE).
- EQUIPOISE. TB-M-Y9L (Wmsn. N.); slightly □.
- ERL KING. TB-FF-B7D (Kirk. N.); unusually □.
- ESPLANADE. Fulv-MF-R8M (Nic.-Jr. 1933); Nic.-Jr. 1933.
- FERVIENTE. Jap-Sgl-6M (Gers. N.).
- FLORENCE ZACHARIE. Hex-radieristatae-MF-B1M (Nic.-Jr. 1933); Nic.-Jr. 1933.
- FLUFFY RUFFLES. TB-M-W7L (Gers. N.); (CECIL MINTURN x CAROLINE E. STRINGER; locust blossom □.
- FLYING CLOUD. Jap-Sgl-5 (Nes. N.).
- FRANKLIN ROOSEVELT. IB-M-FF-B7D (McDade N.); (CARDINAL x AUTUMN KING).
- FRENIER. Laev-MF-B7L (Nic.-Jr. 1933); Nic.-Jr. 1933).
- FROST QUEEN. IB-M-FF-WW Sass-H.P.; Hill-H.M., 1933); Hill-H.M. 1933; (AUTUMN KING x); slightly □; *Autumn King Junior*; *King Junior-WW*.
- GAHANO. Sib-E-R3D rev. (Gers. N.); (PERRY BLUE x BLUE KING).
- GAUCHO. TB-M-Y9D (Wmsn. N.); slightly □.
- GENTILLY ROAD. Hex-radieristatae-MF-B1D (Nic.-Jr. 1932); Nic.-Jr. 1932; *Giganticoerulea* var. *Deep Blue*.
- GENTIUS. IB-E-B1D (Sass-H.P. N.); (*pumila* x *trojana*); □.
- GEORGIAN BAY. Pris-MF-B7M (Nic.-Jr. 1933); Nic.-Jr. 1933.
- GIGANTICAERULEA ALBA. Hex-radieristatae-MF-WW (Nic.-Jr. 1932); Nic.-Jr. 1932; *Giganticoerulea* var. *alba*.
- GLINT O'GOLD. TB-MF-Y4M (Wash.; Nes. N.); □.
- GOLD FLAKE. TB-W8D (Mur. 1933); Orp. 1933; (W. R. Dykes x).
- GOLDEN HELMET. TB-F-S9M (Sass-J. 1933); Sass-J. 1933; Sass-H.P. 1933; (RED WING x CARDINAL); slightly □.
- GOLDEN WEST. IB-E-Y4M (Sass-J. N.); (yellow *pumila* hybrid x tall yellow seedling).
- GOLD VELLUM. IB-F-Y4L (Gage N.); (CORONATION x mixed pollen); □.
- GRAECA. Jap-Dbl-5 (Waterer 1932); Waterer 1932; *Nymphe*.
- GRAY CLOUD. DMB-E-S2M (Sass-J. 1933); Sass-J. 1933; Sass-H.P. 1933; (yellow seedling of (*pumila* x)) x (regelio-cyclus var. BEATRIX).
- GUINEA HEN. TB-M-B2D (Richer N.); (MME. CHEREAU x TENEBRAE); □.
- HALOKA. Fulv-Hex-R7M (Wash. N.).
- HAOLE. TB-F-W1 (Thom.-W. N.); (LORD OF THE WEST x); □.
- HIGH DELIGHT. TB-M-W3L (Sturt. N.); (SAN FRANCISCO x MAUNA LOA); □.
- HOBO. DB-FF-Y9D (Wmsn. N.).
- IBERVILLE. Hex-radieristatae-MF-B1M (Nic.-Jr. 1933); Nic.-Jr. 1933.
- ICY GLOW. DB-E-W6M (Emig. 1933); Kenwood 1933.
- ILIA. Sib-MF-WW (Gers. N.); (PERRY BLUE x BLUE KING).
- I-LIKA. DB- (Hires N.); pending.
- JAMES ZACHARIE. Vinic-MF-B1D (Nic.-Jr. 1933); Nic.-Jr. 1933.
- J. D. NIES. Hex-Fulv-MF-S4D (Nies N.); (HEXAGONA PURPUREA, Dean, x *fulva*) x (HEXAGONA PURPUREA, Dean, x *fulva*) through three generations.

- JUBA. TB-R3M (Cay. N.); C. M., S. N. H. F., 1933; Rev. Hort. 105: 413. 16 June 1933.
- KEMBYO. Sib-EM-B7M (Gers. N.); (PERRY BLUE x BLUE KING).
- KERULA. TB-M-R7M (Gers. N.); (SARABAND x SEMINOLE).
- KHALED. Sib-MF-B9D rev. (Gers. N.); (BLUE KING x PERRY BLUE).
- KHARTOUM. TB-R9D (Pilk. N.); (MEGAS x DOMINION); *Nairobi* (Pilk.), J. R. H. S. No. 1, 1933.
- KIDDIE. DB-E-Y6M (Thom.-W. N.); □.
- KING JUNIOR. IB-M-FF-B3M (Sass-H.P.; Hill-H.M. 1933); Hill-H.M. 1933; (AUTUMN KING x); slightly □; *Autumn King Junior*.
- KINGLET. TB-M-Y4D (Wmsn. N.);
- KING PELLEES. Jap- (Waterer 1932); Waterer 1932; *Ulysses*.
- KOCHINETTE. IB-E-B7D (Kirk. N.); (*Kochii* x); slightly □.
- LADY ELEANOR. TB-EM-S3D (Barker-M.R. N.); (ALCAZAR x); □.
- LADY GAGE. TB-M-W7L (Gage N.); □.
- L'ALLEGRO. TB-M-R9M (Gers. N.); (SARABAND x SEMINOLE); slightly □.
- LA PENSLA. IB-E-W4L (Thom.-W. N.); (LORD OF JUNE x INGE-BORG); □.
- LAUGHING WATER. Jap-Dbl-WW (Freeborn N.).
- LAURA HUTCHESON. IB-M-FF-B3D (Sass-H.P.; Hill-H.M. 1933); Hill-H.M. 1933; (AUTUMN KING x); slightly □.
- LEMONIAS. DB-E-Y4D (Thom.-W. N.); (*pumila* x); □.
- LE VIEUX CARRE'. Fulv-MF-R7M (Nic.-Jr. 1933); Nic.-Jr. 1933.
- LILY CREAMER. TB-M-S7L (Creamer 1933); Creamer 1933.
- LITTLE SMOKY. TB-M-B1D (Essig 1933); Essig 1933; (ALCAZAR x SOUV. DE MME. GAUDICHAU) x (UNCLE REMUS x DOMINION).
- LITTLE TYKE. DB-E-R7D (Thom.-W. N.); (BLUESTONE x red intermediate seedling); □.
- LOLA CSONKA. TB-M-R9D (Gers. N.); (MME. DE SEVIGNE x ROSE MADDER); rich grapy □; (pronounced Chon'ko).
- LONDON PRIDE. TB-R9L (Mur. 1933); Orp. 1933; (Aphrodite x).
- LOUISIANA SUNSET. Fulv-MF-R7D (Nic.-Jr. 1933); Nic.-Jr. 1933.
- MADRIGAL. TB-W8D (Mur. 1933); Orp. 1933; seedling containing Imperator and Aphrodite; C. M. Iris Soc. (Eng.) 1933; C. Prelim. Com., R. H. S., 1933.
- MAID OF TENNESSEE. TB-MF-B7 (Wash.; Nes. N.); □.
- MALUSKA. TB-F-R7D (Nes. N.); (SHEKINAH x); slightly □.
- MANDEVILLE. Hex-radieristatae-MF-B7L (Nic.-Jr. 1933); Nic.-Jr. 1933.
- MARGOT CASTELLANOS. Fulv-MF-R7L (Nic.-Jr. 1933); Nic.-Jr. 1933.
- MARMARGE. TB-M-B1M (Creamer 1933); Creamer 1933; (WILLIAM MARSHALL x MARGERY); □.
- MARPESSA. Jap-Dbl-5 (Waterer 1932); Waterer 1932; *Siren*.
- MARY ALICE. TB-E-B3M (Richer N.); (CRUSADER x LENT A. WILLIAMSON); □.
- MARY LEE DONAHUE. TB-MF-Y4D (Gage N.); (WM. R. DYKES x PRIMROSE); □.
- MATOAKA. TB-M-S9M (Friend N.); wistaria □.
- MECCA. Jap-Sgl-3 (Nes. 1933); Nes. 1933.
- METAIRIE. Fulv-MF-B7L (Nic.-Jr. N.).

- MIAMI. TB-EM-B7D (Rhein. N.);
□.
- MIAMI CHIEF. TB-M-R9D (Richer N.); (SEMINOLE x mixed pollen); □.
- MIDWEST GLORY. TB-F-B3D Thom.-W. N.); (Sass seedling x mixed pollen); □.
- MINSTRING. TB-M-B1L (Creamer 1933); Creamer 1933; slightly □.
- MINTGER. TB-M-B1L (Creamer 1933); Creamer 1933.
- MISS BLUE. TB-M-B1D (McKee N.); (SENSATION x mixed pollen); □.
- MME. RECAMIER. TB-EM-S4L (Wash.; Nes. N.); *Loveliness* (Wash.).
- MONARDA. IB-FF-R9D (Richer N.); (SHEKINAH x PARISIANA); □.
- MONOMOY. TB-EM-B3D (McKee N.); (blue seedling x ROYAL BEAUTY).
- MOONGLO. TB-M-Y8M (Wmsn. N.).
- MOONSPRITE Sib-W7L (Jen. N.); (SUPERBA x).
- MOUNTAIN LAKE Sib-MF-B3D rev. (Gers. N.); (BLUE KING x PERRY BLUE).
- MRS. CREAMER TB-M-W7L (Creamer 1933); Creamer 1933.
- MT. WHITNEY Spur-W4 (Millik. 1933); So. Cal. 1933; H. M., A. I. S., 1932 (*ochroleuca* x).
- MUGGINS DB-E-B9D (Thom.-W. N.) (BLUESTONE x); □.
- MUSKOGEE Hex-MF-R7L (Nic.-Jr. N.).
- MYSTIC MOON Sib-F-W4L (Gers. N.); (BLUE KING x PERRY BLUE).
- NARONDA TB-M-B1D (Hall N.); (PRINCESS BEATRICE x) x (VIOLACEA GRANDIFLORA); slightly □.
- NATIONAL PROSPERITY TB-B9D (National 1933); National 1933.
- NAVADAW 1B-M-S7M (Creamer 1933); (DAWN x NAVAJO); slightly □.
- NEMACOLIN TB-F-Y9D (Hall + N.); (JACQUESIANA x) x (MONTOUR); very slightly □.
- NEVA Jap-Sgl-3 (Nes. N.).
- NIOVA Sib-EM-W4. (Gers. N.); (PERRY BLUE x BLUE KING).
- OCTOBER BLUE IB-M-FF-B1M (Sass-H.P.; Hill-H.M. 1933); Hill-H.M. 1933; (AUTUMN KING x); delicately □.
- ODERIC TB-MF-R9D (McKee N.); (MRS. VALERIE WEST x mixed pollen); □.
- OGLETHORPE Laev-MF-B1L (Nic.-Jr. 1933); Nic.-Jr. 1933.
- OLD VELVET TB-M-S9D (Gers. N.); (CHASSEUR x MILDRED PRESBY); honey sweet □.
- OLYMPIC TB-EM-W1M (Berry N.); (BRUNO) x (*mesopotamica* x MAGNIFICA).
- ONTARIO TB-S9L (Pilk. N.); (APHRODITE x); J. R. H. S. #1, 1933.
- OPAL BLUE Sib-B1L (Sturt.; Nes. 1933); Nes. 1933.
- OPAL DAWN TB-M-S4L (Sturt. N.); sweetly □.
- PALATLAS TB-E-B7L (Creamer 1933); (PALCENG x ATLAS); very □.
- PEER GYNT TB-MF-W8M (Wash.; Nes. + N.); □.
- PEWEE IB-M-WW (Wmsn. N.); table iris; *Columbine* (Wmsn.) A. I. S. Bull., July, 1933.
- PINK BUTTERFLY TB-F-S4L (Wash.; Nes. N.).
- PINK JEWEL IB-M-R7L (Salb. 1933); Salb. 1933; (GAVIOTA x GEORGE YELD); □.
- PINK LADY IB-EM-S4L (Wash.; Nes. N.); □.
- PINK OPAL TB-F-R1L (Sass-J. N.).

- PLURABELLE TB-Y9M (Cay. 1933); C. M., S. M. H. F., 1933.
- POINT ALA HACHE Vinie-MF-B7D (Nic.-Jr. 1933); Nic.-Jr. 1933.
- POMONA Sib-MF-B7M (Gers. N.); (BLUE KING x PERRY BLUE).
- PONTCHARTRAIN Hex-MF-B7L (Nic.-Jr. 1933); Nic.-Jr., 1933.
- PRELUDE TB-M-S3L (Sturt. N.); sweetly □.
- PURPLE GIANT TB-B1D (Gage 1933); *Giant Purple*.
- PURPLUM IB-F-R3D (Creamer 1933); Creamer 1933; (RED CLOUD x).
- RAPIER TB-M-B7M (Richer N.); (AFTERGLOW x ISOLINE); □.
- RED COMET TB-M-R7D (McKee N.); (DAUNTLESS x mixed pollen); slightly □.
- REDGLOW TB-F-S9D (Essig 1933); Essig 1933; (MODOC x BRUNO); pleasantly □.
- RED KING Jap-Sgl-6 (Way. N.).
- RED ORCHID IB-E-R7D (Sass-J. N.); (red purple *pumila* hybrid x dark red purple tall seedling).
- ROSE DUBARRY Jap-Dbl-3 (Nes. 1933); Nes. 1933.
- ROSE MIGNON Jap-Sgl-5 (Nes. 1933); Nes. 1933.
- ROSY EAST TB-M-R9M (Gers. N.); (SARABAND x SEMINOLE); grapy □.
- ROYAL PRINCE IB-M-B9D (Gers. N.); (sport of FLAMMEN-SCHWERT); pleasingly □.
- RUBY GIANT Jap-Dbl-6 (Way. N.).
- SALUTE TB-M-S9L (Sturt. N.); sweetly □.
- SAM DAVIS TB-EM-R7M (Wash.; Nes. N.); slightly □.
- SAMUEL L. EARLE TB-EM-R7D (Cahoon N.); (APHRODITE x IMPERATOR); slightly □.
- SAN DB-E-Y4L (Hires, inf. distr. 1933); A. I. S. Bull., July, 1933.
- SANDIA TB-M-R7M (Wmsn. N.); □.
- SANDY IB-F-S5M (Creamer 1933); Creamer 1933; (RED CLOUD x).
- SARANOLE TB-M-R7M (Creamer 1933); Creamer 1933.
- SARSEM TB-M-R9L (Creamer 1933); Creamer 1933.
- SAZERAC Fulv-MF-R7M (Nic.-Jr. 1933); Nic.-Jr. 1933.
- SEMISAR TB-M-R3L (Creamer 1933); Creamer 1933.
- SEMBAN TB-M-B9M (Creamer 1933); Creamer 1933.
- SEPTEMBER SKIES IB-M-FF-B7D (Sass-H.P.; Hill-H.M. 1933); Hill-H.M. 1933; (AUTUMN KING x); slightly □.
- SILVERY SKY Sib-M-B1L (Gers. N.); (PERRY BLUE x BLUE KING).
- SISTER TB-F-R3L (Sturt. N.); (JUBILEE x NINEVEH).
- SKYBLUE WATER Sib-EM-B1M (Gers. N.); (PERRY BLUE x BLUE KING).
- SMIDGEN DMB-E-B7D (Berry N.); (*korolkowi* x).
- SNOWMAID Jap-Sgl-1 (Nes. 1933); Nes. 1933.
- SPANISH FORT Hex-radieristatae-MF-B8L (Nic.-Jr. 1933); Nic.-Jr. 1933.
- SPOKAN TB-F-S9D (Sass-J. 1933); Sass-J. 1933; Sass-H.P. 1933; (RED WING x KING TUT); slightly □.
- SPRINGTIME TB-M-R1L (Sturt. N.); (YELLOW MOON x seedling #F5-12).
- STONEWALL JACKSON TB-EM-Y9D (Wash.; Nes. N.); □.
- STORMY DAWN DMB-E-S3L (Sass-J. 1933); Sass-J. 1933; Sass-H.P. 1933; (yellow seedling of (*pumila* x)) x (*regelio-cyclus* var. BEATRIX).
- SUNDIPT TB-M-Y4M (Wmsn. N.); slightly □.

SUNDOT TB-M-B9D (McKee N.);
 (RED RADIANCE x mixed pollen);
 slightly □.

SUNOL TB-M-S4D (Mohr-Mit.
 1933); Salb. 1933; (KING MIDAS
 x); □.

SUNTAN TB-F-S4D (Baker-S.H.
 N.); (VESPER GOLD x VESPER
 GOLD); slightly □.

SUSA IB-E-R9D (Sass-H.P. N.);
 (*pumila* x AMAS); □.

SWEET ALIBI TB-E-Y4L (White-
 C.G. N.); (MIRASOL x PURIS-
 SIMA); H. M., A. I. S., 1932.

SYLVIA LENT TB-M-Y5L (Shull
 1933); Shull 1933; (SOPHRONIA x
 COPPERSMITH); agreeably □.

SYRINX TB-M-R3D (Gers. N.);
 table iris; (SARABAND x SEMI-
 NOLE); locust blossom □.

TAGAMI TB-M-R3D (Gers. N.);
 (SARABAND x SEMINOLE); slight
 grapy □.

TAI-O-WA ++ Sib-M-W4L (Gers.
 N.); (PERRY BLUE x BLUE KING).

TALLAHASSEE Hex-MF-R7L
 Nic.-Jr. N.).

TARNEVERRO TB-F-S9D (Thom.-
 W. N.); (KING TUT x a Longfield
 seedling); slightly □.

THUNER SEA Sib-M-B1D (Gers.
 N.); (PERRY BLUE x BLUE KING).

TINT O'TAN TB-MF-S4L (Ayres
 N.).

TLAYA Sib-M-B3L (Gers. N.);
 (PERRY BLUE x BLUE KING).

TOLANA+ Fulv-Hex R7L (Wash N.).

TOURMALINE TB-M-S7M (Berry
 N.).

TRAILS END TB-M-S7M (Wmsn.;
 Pat. N.).

TRANQUILITY TB-MF-B7M (Gage
 N.); (LADY BYNG x mixed pol-
 len); □.

TUCCIA Sib-MF-WW (Gers. N.);
 (PERRY BLUE x BLUE KING).

UKIAH TB-M-S9D (Essig 1933);
 Essig 1933; (ALCAZAR x SOUV. DE
 MME. GAUDICHAU) x (MRS. VA-
 LERIE WEST).

ULLSWATER Sib-MF-B3D rev.
 (Gers. N.); (BLUE KING x PERRY
 BLUE).

VELVO DMB-E-R3M (Sass-J. 1933);
 Sass-J. 1933; Sass-H.P. 1933;
 (*regelio-cyclus* var. BEATRIX) x
 (yellow seedling of (*pumila* x ...)).

VESPER HOUR TB-E-S1L (Wash.;
 Nes. N.).

VIXEN DB-E-B7D (Thom.-W. N.);
 (*pumila* x Sass *pumila* seedling);
 □.

WAHALLE Fulv-Hex-S4L (Wash.
 N.).

WAIKIKI IB-E-B7D (Thom.-W.
 N.); (SEMINOLE x intermediate
 seedling); □.

WAR EAGLE TB-F-R9D (Sass-J.
 N.); slightly □.

WENATCHEE TB-F-S9D (Thom.-
 W. N.); (KING TUT x a Longfield
 seedling).

WESTLANDER TB-M-B3D (Essig
 1933); Essig 1933; (CALIFORNIA
 BLUE x LOUIS BEL) x (UNCLE RE-
 MUS x MOA).

WHITE MARBLE TB-M-WW
 (Wass. N.).

WHITE SPRAY Sib-F-WW (Gers.
 N.); (PERRY BLUE x BLUE KING).

WILBICO TB-M-B9D (Creamer
 1933); Creamer 1933.

WINNER TB-M-R1D (Sturt. N.);
 (FELICITY x CAMELIARD seedling).

WINTER SKIES Jap-Sgl-7 (Nes.
 1933); Nes. 1933.

WITCH OF SALEM TB-MF-B3D
 (Berry N.).

WONDERCHILD TB-B9D (National
 1933); National 1933; (DAUNT-
 LESS x BLUE VELVET); *Blue Vel-
 vet's Wonder Child*.

YANEKA Fulv-Hex-B1 (Wash. N.).

ZOUATLA TB-M-R2M (Creamer
 1933); Creamer 1933; (ZOUAVE x
 ATLAS); slightly □.

ZU ZAN TB-EE-S4D (Thom.-W.
 N.); (REMBRANDT x MIDWEST).

VARIETIES APPROVED IN 1933, BUT NOT REGISTERED

This list contains certain varieties which have been approved for registration, but because the data has been slow coming in, the names have been included here and marked pending, and when registration becomes complete on these, it will be unnecessary to publish them again, except when eventually introduced. Such action serves the added purpose of advising breeders that these names are no longer available. THIS FEATURE HAS ALREADY RESULTED IN ABUSES, and will be discontinued. In future no approvals will be made on request from breeders unless accompanied by detail description (see rules given before list of registrations).

- ADULATION (Cay. N.); pending.
 ALADDINS LAMP Spur-Y4D (San.-L.W.; Cooley 1933); Cooley 1933.
 ALICE HARDING TB-Y4L (Cay. 1933); Dykes Medal and Harding Prize, S. N. H. F. 1933; Gard. Chron. 3rd Ser. 93: 409. 10 June 1933; *Roi Soleil*.
 AMÉNOPHIS (Cay. N.); pending.
 ANAMITE (Cay. N.); pending.
 ANDROCEE TB-S3M (Vilm. N.); C. M., S. N. H. F., 1933; Gard. Chron. 3rd Ser. 93: 409. 10 June 1933.
 ANN STODDER (Donahue N.); pending.
 ANN TEBBETTS (Snow N.); pending.
 A T T I T A S H TB-S3L (Dennett 1933); Riverview 1933.
 BADINAGE (Cay. N.); pending.
 BAMBARA (Cay. N.); pending.
 BANNERET TB-S (Mur. N.); Gard. Ill. 54: 354. 17 June 1933.
 BARIRA TB-S3M (Cay. N.); C. M., S. N. H. F., 1933; Rev. Hort. 105: 413. 16 June 1933.
 BENJAMINE (Cay. N.); pending.
 BOHÊME (Cay. N.); pending.
 BRALLIARS GIANT TB-E-R7L (Bral. bef. 1933); Ashley 1933.
 BROCELIANDRE (Cay. N.); pending.
 C. G. VAN WIERINGEN Dut-Y4D (deG. N.); A. M. Haarlem 1931.
 CHATÉ (Cay. N.); pending.
 CHEOPS TB-B3D (Cay. N.); C. M., S. N. H. F., 1933; Gard. Chron. 3rd Ser. 93: 409. 10 June 1933.
 CLÉMENCE ISAURE (Cay. N.); pending.
 CORINTHE (Cay. N.); pending.
 COURTISANE (Cay. N.); pending.
 CUPIDON (Cay. N.); pending.
 DRESDEN CHINA TB-W2M (Baker-G.P. N.); Bronze Medal, R. H. S., 1933; Gard. Ill. 54: 354. 17 June 1933.
 E. B. WILLIAMSON (Wmsn. N.); pending.
 ELECTRE CAYEUX TB-S1L (Cay. 1931); *Electre* (Cay.).
 EMBLEME (Cay. N.); pending.
 EMOTION (Cay. N.); pending.
 ENIGME (Cay. N.); pending.
 ENSATA GRANDIFLORA Ens-B (Collect. Thibet); Dykes Handbk. 141, 1924; *ensata oxypetala*.
 ENSATA GRANDIFLORA ALBA Ens-WW; Ohio State Bot. Gard. 1933.
 EPI D'OR (Cay. N.); pending.
 ESPANA (Cay. N.); pending.
 ESPOIR (Cay. N.); pending.
 EURYCLEE TB-B3M (Vilm. N.); C. M., S. N. H. F., 1933; Gard. Chron. 3rd Ser. 93: 409. 10 June 1933.
 EVEREST TB- (Mur. N.); pending.
 FAKIR TB-B7D (Cay. N.); C. M., S. N. H. F., 1933; Gard. Chron. 3rd Ser. 93: 409. 10 June 1933.

- FARFADET (Cay. N.); pending.
 FÉTICHE (Cay. N.); pending.
 FLEUR D'OR (Cay. N.); pending.
 FRÉTILLON (Cay. N.); pending.
 GALIBOTTE (Cay. N.); pending.
 GEVA (Dykes-K. N.); J. R. H. S. #1, 1933.
 GOLD FLAKE TB-W8D (Mur. 1933); Orp. 1933; (Wm. R. Dykes x).
 GRINGOIRE (Cay. N.); pending.
 HABANERA (Cay. N.); pending.
 HAREBELL (Burgess N.); pending.
 H. C. VAN VLIET Dut- (deG. N.); A. M., Haarlem 1931.
 HELIANTHE (Cay. N.); pending.
 ICULISMA (Cay. N.); pending.
 IDYLLE (Cay. N.); pending.
 I-LIKA DB- (Hires N.); pending.
 IMWALD (G & K); Wass. 1933; pending.
 INGENIEUR WINSSINGER TB-S7D (Denis bef. 1933); Salb. 1933.
 JAN KRUSEMAN Dut-W4; A. M., Haarlem 1931.
 J. M. DUVERNAY TB-S3M (Cay. 1933); C. M., S. N. H. F., 1933; Gard. Chron. 3rd ser. 93: 409. 10 June 1933; *Duvernay*.
 JOCELYN (Cay. N.); pending.
 JUBA TB-R3M (Cay. N.); C. M., S. N. H. F., 1933; Rev. Hort. 105: 413. 16 June 1933.
 KIDAL (Cay. N.); pending.
 K. MOLENAER Dut- (deG. N.); A. M., Haarlem 1930.
 LADY BEATRICE STANLEY Ret-B2L; Gard. Ill. 54: 722, 3 Dec. 1932; var. of *histrioides*.
 LADY BLEDISLOE (Burgess N.); pending.
 LAOTIEN (Cay. N.); pending.
 LEO DELIBES TB-S5D (Cay. 1933).
 LONDON PRIDE TB-R9L (Mur. 1933); Orp. 1933; (APHRODITE x).
 LORD OF THE WEST pending.
 LUTETIA (Cay. N.); pending.
 MADAME G. MILLET TB-S3D; C. M., S. N. H. F., 1933; Gard. Chron. 3rd Ser. 93: 409. 10 June 1933; pending.
 MADRIGAL TB-W8D (Mur. N.); (seedling containing IMPERATOR and APHRODITE); C. M., Iris Soc. (Eng.) 1933; C. Prelim. Com., R. H. S. 1933; by letter from Mrs. O. Murrell.
 MAMARU (Cay. N.); pending.
 MANET TB-FF-S6D rev. (Cay. 1933).
 MARIVAUX (Cay. N.); pending.
 MARY PARK (Snow N.); pending.
 MAYFAIR TB-S9M (Mur. 1933); Orp. 1933.
 MEHUL TB-S4M rev. (Cay. 1933).
 MORGANE (Cay. N.); pending.
 MRS. H. D. BENNETT (Burgess N.); pending.
 NEPTUNUS RC-S3M (Van T. N.); A. M., Haarlem 1930.
 NEREE TB-S3M (Vilm. N.); C. M., S. N. H. F., 1933; Gard. Chron. 3rd Ser. 93: 409. 10 June 1933.
 NICOLE LASSAILLY (Cay. N.); pending.
 NO-NEDA DB- (Hires N.); pending.
 NUAGE (Cay. N.); pending.
 PAILLASSE (Cay. N.); pending.
 F. C. SOUTMAN Dut-W4 (deG. N.); A. M., Haarlem 1930.
 PERIHELION (Snow N.); pending.
 PERSIAN PRINCESS TMB-S7D (Dean 1933); So. Cal. 1933.
 PINK LOTUS TB-F-R7L (Neel 1933); Orp. 1933.
 PRAXITELE (Cay. N.); pending.
 PRESIDENT LEBRUN TB-S6D (Cay. 1933).
 PRINSES JULIANA Eng-B3D (Byvoet 1928 (?)); A. M., Haarlem 1930; *Princess Juliana*.

PURPLE HEIGHTS (Burgess N.); pending.	SOUVENIR DE MA MÈRE (Cay. N.); pending.
RABAGAS (Cay. N.); pending.	TAGADA (Cay. N.); pending.
RADIANT MORN (Burgess N.); pending.	THEODORA CAYEUX TB-S9M (Cay. bef. 1931); <i>Theodora</i> (Cay.).
RRANGATIRA (Burgess N.); pending.	THERMIDOR (Cay. N.); pending.
REDEMPTION TB-B7L (Cay. N.); C. M., S. N. H. F., 1933; Rev. Hort. 105: 413. 16 June 1933.	TIRABA (Cay. N.); pending.
RIALTO TB-F-B1M (Bliss 1927); Orp. 1933.	TONKINOIS (Cay. N.); pending.
SALTARELLE (Cay. N.); pending.	TRIOMPHANT (Cay. N.); pending.
SERBIAN MAJOR TB-B3M (1933); Orp. 1933; □; Coll. Serbia 1914-1918; sent to Orp. by Mr. Foster-Melliar.	UNIVERSE Jap-Dbl-3; Burpee 1933.
SOUDANAIS (Cay. N.); pending.	VERITE (Cay. N.); pending.
	VIVANDIERE (Cay. N.); pending.
	WE-DAMA DB- (Hires N.); pending.
	WHITE LANCE Spur-WW (San-L.W.; Cooley 1933); Cooley 1933.
	WIELAND Dut-B1M A. M., Haarlem, 1931.

NAMES UNDER INVESTIGATION

Some of these may prove to be synonyms, but those which may be found, after investigation, to be new varieties with approvable names will then be admitted to the Approved List, and in some instances registered.

Coronation Imperial. TB- Wass. 1933.	1933; Perry says this is a numbered seedling which remains to be identified.
Dutch Beauty. Hort. July 15, 246, 1933.	
Elfin Sprite. DB-WW (not Mor.); A. I. S. Bull., July, 1933.	Little Bride. Ret-W. Gard. Ill. 54: 119. 4 Mar. 1933.
Faitii. Correvo 1933.	MacDoners. Sib- Correvo 1933.
Hollies (Perry N.); J. R. H. S., #1,	Sky-No-Ryo. Jap-Dbl-3. Burpee 1933.

VARIETIES WHOSE NAMES WERE UNAPPROVED IN 1933

Blue Danube (Meyer-R.H. N.); Bronze Medal, R. H. S., 1933.	Hermione. TB-S4M (Cay. N.); C. M., S. N. H. F., 1933; Gard. Chron. 3rd Ser. 93: 409. 10 June, 1933.
Bralliar's Branching. TB-B3D (Bral. bef. 1933); Ashley 1933.	Horace. TB-Y4L (Cay. N.); C. M., S. N. H. F., 1933; Gard. Chron. 3rd Ser. 93: 409. 10 June 1933.
Bralliar's Giant Bicolor. TB-M-Y9D (Bral. bef. 1933); Ashley 1933.	Kumochi-Guma. Jap-Dbl- Vaug. 1933.
Cybele. TB-B7M (Cay. N.); C. M., S. N. H. F., 1933; Gard. Chron. 3rd Ser. 93: 409. 10 June 1933.	Little Boy Blue. Sib-B1M (Clev. 1932); Nes. 1933.
Degas. TB-S8L (Cay. 1933).	Mozart. TB-S5M rev. (Cay. 1933).
Grey Dawn. TB- (Gotts. 1933); will be discontinued.	Murillo. TB-S6M rev. (Cay. 1933).
	Oceana. TB-Y4M (Cay. 1933).

Old Rose. TB- (Gotts. 1933); will be discontinued.
 Oriole. Spur-Y1L (San.-L.W.; Cooley 1933); Cooley 1933.
 Proserpine. RC-S9M (Van T.); A. M., Haarlem 1930.

Rosalinde. Eng-B3L rev. A. M., Haarlem 1930.
 White Beauty. Eng-W2 (Elder.); A. M., Haarlem 1931.

SYNONYMOUS NAMES OF 1933

Cataloguers whose names appear after the synonymous names will confer a favor on the Registration and Introduction Committee if they will use the correct names in future editions of their literature. A bit of careful proof-reading will prevent many of them, as most are just misspelled names.

Abode—ADOBE. Long. 1933.
Ahawnee—AHWAHNEE. Schreiner 1933.
Albarte—ALBATRE. Schreiner 1933.
Allan Hoyt—ALAN HOYT. Stoner 1933.
All-Lu-Wee—AL-LU-WEE. Wass. 1933.
Ambassador—AMBASSADEUR. Pudor 1933.
A. M. Cayeux—ANNE MARIE CAYEUX. Gard. Ill. 55: 311. 27 May 1933.
Avator—AVATAR. Schreiner 1933.
Avigata—AIOIGATA. Wayside 1933.
Avril 27—27 AVRIL. Wass. 1933.
Blue Bonnet—BLUEBONNET. Wass. 1933.
Blue Horizon—S. DE V Lieger. Burpee 1933.
Boadicae — BOADICEA. Schreiner 1933.
Bolling Broke—BOLINGBROKE. Wass. 1933.
Brautjunfer — BRAUTJUNGER. Ainsley 1933.
Brittoness—BRITONESS. Cooley 1933.
Caesar II—CAEZARS BROTHER. Stoner. 1933.
Calibee—CALEBEE. Schreiner 1933.

Camelliard—CAMELIARD. Cooley 1933.
Camillia Dubur—CAMILLA DUBUAR. Wass. 1933.
Chaemae Iris Aurea—CHAMAEIRIS AUREA. Schreiner 1933.
Chaemae Iris Naomi—CHAMAEIRIS NAOMI. Schreiner 1933.
Chameur — CHARMEUR. Schreiner 1933.
Church Mouse — CHURCHMOUSE. Wass. 1933.
Concohar — CONCHOBAR. Wass. 1933.
Conte Hautefeule — COMTESSE D'HAUTEVILLE. Schreiner 1933.
Cordon Blue—CORDON BLEU. Wass. 1933.
Corolian—CORIOLAN. Schreiner 1933.
Diximunde — DIXMUDE. Schreiner 1933.
Dixmunde—DIXMUDE. Wass. 1933.
Doly Madison—DOLLY MADISON. Handle. 1933.
Dorothy K. Williamson—DOROTHEA K. WILLIAMSON. Vaug. 1933.
Doza—DOXA. Schreiner 1933.
Ethel Wynn Dubuar—ETHELWYN DUBUAR. Schreiner 1933.
Flamenschwert—FLAMMENSCHWERT. Schreiner 1933.

- Flammerschwert*—F L A M M E N - SCHWERT. Wass. 1933.
- Freida Mohr*—F R I E D A MOHR. Vaug. 1933.
- Fuerstin Loujay*—FUERSTIN LON- YAY. Schreiner 1933.
- Garvan*—PARVAR. Hill-H.M. 1933.
- Gaviotta*—G A V I O T A. Schreiner 1933.
- Germaine Perthuis*—G E R M A I N E PERTHUIS. Wass. 1933.
- Goldvliss* — G O L D V L I E S. Schreiner 1933.
- Gowing Embers*—G L O W I N G E M - BERS. Kingsley 1933.
- Graminae*—GRAMINEA. Wass. 1933.
- Heather Stone Copper*—HEARTH- STONE COPPER. Wass. 1933.
- Helaine*—HELIANE. Schreiner 1933.
- Henri Riverier*—HENRI RIVIERE. Schreiner 1933.
- Hypnus*—HYPNOS. Schreiner 1933.
- Iceberg (Dykes)* — G L A C I L L A (Dykes-K.). Schreiner 1933.
- Indian Chief*—W. VERSCHUUR. Burpee 1933.
- Kestral*—KESTREL. Schreiner 1933.
- Kynsna*—KNYSNA. Wass. 1933.
- La Finace*—FIANCEE DB. Schreiner 1933.
- L'Harbaudiere*—L'HAUBAUDIERE. Schreiner 1933.
- Lord Wolsey* — LORD WOLSELEY. Schreiner 1933; Stoner 1933.
- Lullworth*—LULWORTH. Schreiner 1933.
- Ma Mei*—MA MIE. Wass. 1933.
- Marion Lapham*—MARIAN L A P - HAM. Schreiner 1933.
- Mareschall Ney*—M A R E S C H A L NEY. Schreiner 1933.
- Mareschel Ney* — M A R E S C H A L NEY. Schreiner 1933.
- Marshall Foch*—MARSHAL FOCH. Schreiner 1933.
- Melchoir*—M E L C H I O R. Schreiner 1933; Wass. 1933.
- Mich. Charrier* — M I C H E L I N E CHARRIERE. Schreiner 1933.
- Migonette*—MIGNONETTE. Schrein- er 1933.
- Minnieford*—MINNIE FORD. J. R. H. S., #1, 1933.
- Mlle. Suz. Woolfrey*—M L L E. SU- ZANNE WOOLFRY. Schreiner 1933.
- Mme. Abel Chatney*—MME. ABEL CHATENAY. Schreiner 1933.
- Mme. Abel Chautney*—MME. ABEL CHATENAY. Wass. 1933.
- Mme. de Beaumarchis*—MME. DE BEAUMARCHAIS. Schreiner 1933.
- Mme. Henri Cayeu*—MME. HENRI CAYEUX. Wass. 1933.
- Mme. Suz. Woolfrey*—M L L E. SU- ZANNE WOOLFRY. Schreiner 1933.
- Morning Dove*—MOURNING DOVE. Wass. 1933.
- Mrs. Newbronner*—MRS. NEUBRON- NER. Wass. 1933.
- Mrs. R. C. Boutellier*—MRS. R. C. BOETTCHER. A. I. S. Bull., April, 1933.
- Mt. Mist*—M O U N T A I N MIST. Schreiner 1933.
- Mystrey*—MYSTERY. Schreiner 1933.
- Natalis*—NATHALIS. Wass. 1933.
- Nepthne*—NEPENTHE. Wass. 1933.
- Ningall*—NINGAL. Wass. 1933.
- Norrone*—NORRENA. Wass. 1933.
- Ochraleuca*—**ochroleuca**. Stoner 1933.
- Okabodji*—OKOBOJI. Schreiner 1933.
- Oliver Perthuis*—OLIVIER P E R - THUIS. Schreiner 1933.
- Pallida Astarte*—ASTARTE. Pfeif. 1933.
- Paradoxa albo-lutescens*—CHOSHAB.
- Peltit Vitry*—PETIT VITRY. Wells 1933.
- Pervenah* — PERVANEH. Schreiner 1933.

- Petie Daniel* — PETITE DANIEL. Schreiner 1933.
- Polinchinelle* — POLICHINELLE. Schreiner 1933.
- Pont. Mousson*—PONT - A - MOUS - SON. Wass. 1933.
- Prosper Laguier*—PROSPER LAUGIER. Vaug. 1933.
- Queen Alexander*—QUEEN ALEXANDRA. Totty 1933.
- Raligar*—RIALGAR. Wass. 1933.
- Richard III*—RICHARD II. Gard. Ill. 55: 292. 20 May 1933.
- Rosakura* — RASAKURA. Schreiner 1933.
- Rousultra*—ROSULTRA. Ainsley 1933.
- Schneecuppe* — SCHNEEKUPPE. Pitysm. 1933.
- Schneekönigin*—SNOW QUEEN. Pfitzer 1933.
- Shiawasse*—SHIAWASSEE. Schreiner 1933.
- Shiwassee* — SHIAWASSEE. Wass. 1933.
- Shot Shades (Per. N.)*—SHOT SILK (Mur.). J. R. H. S. #1, 1933; Perry advises he does not know it.
- Shrewi*—SHREVEI. Correvo 1933.
- Simonie Vassiere*—SIMONE VAISIERE. Wass. 1933.
- Sir Micheal*—SIR MICHAEL. Wass. 1933.
- Skitchewang* — SKITCHEWAUG. Wass. 1933.
- Snowwhite*—SNOW WHITE. Schreiner 1933.
- Snow - Top (syn. Schneekuppe)*—SCHNEEKUPPE. Pudor 1933.
- Souv. Mme. Gaudichau*—SOUV. DE MME. GAUDICHAU. Long-J. D. 1933.
- Sunnybroke*—SUNNYBROOK. Schreiner 1933.
- Theresa Schwartz* — THERESE SCHWARTZ. Pudor 1933.
- Thesus*—THESEUS. Schreiner 1933.
- Thorodred* — THOROBRED. Wass. 1933.
- Uniflora*—*ruthenica*. Pearce 1933.
- Vert-Galant*—VERT GALANT. Schreiner 1933.
- Violet Queen* — W. ZUIDERVELT. Burpee 1933.
- Winneshiek*—WINNIESHIEK. Schreiner 1933.
- Yves Laiassailly*—YVES LASSAILLY. Schreiner 1933.
- Zwanenburg* — ZWANENBURG. Schreiner 1933.

INTRODUCTIONS OF 1933

Including some of previous years not before published.

Uncapitalized are unapproved or under investigation.

- ALADDINS LAMP. Spur-Y4D (San.-L. W. 1933); Cooley, 1933.
- ALCEE. IB-B7M (Vilm. 1922); C. M., S. N. H. F. 1930; Bull. Men. de la Soc. Nat. d'Hort. de France, Mar., 1934, 133.
- ALICE HARDING. TB-Y4L (Cay. 1933); *Roi Soleil*.
- ALKINAH. TB-M-B1M (Creamer 1933); R., 1933.
- ASMODEE. TB-S3D (Vilm. 1925); Bull., Men. de la Soc. Nat. d'Hort. de France, Mar., 1934, 133.
- ATTITASH. TB-S3L (Dennett 1933); Riverview, 1933.

auranitica. Onc-S4D (John Edward Dinsmore, from El Hauran, Syria 1933); R., 1934.

AUGUST FLAME. Fulv-FF-R7M (Nic.-Jr. 1933); R., 1933.

AUTUMN FIRE. Fulv-FF-R7M (Nic.-Jr. 1933); R., 1933.

BALROUDOUR. DMB-E-S3L (Sass-J. 1933); R., 1933.

BARRICOU. TB-R9D (Cay. 1933); C. M., S. N. H. F., 1933; Bull. Men. de la Soc. Nat. d'Hort. de France, Mar., 1934, 133.

BAYOU BARATARIA. Hex-radieristatae-MF-B1L (Nic.-Jr. 1933); R., 1933.

BILOXI. Hex-radieristatae-MF-W2L (Nic.-Jr. 1933); R., 1933.

BLANC MIGNON. Jap-Dbl-1 (Nes. 1933); R., 1933.

BLUE DANUBE. TB-B1M (Meyer-R. H. 1932); Orp. 1932; Bronze Medal R. H. S., 1933; R., 1934.

BLUE MONARCH. TB-F-S1D (Sass-J. 1933); R., 1933.

BLUE TOPAZ. DMB-E-S3M (Sass-J. 1933); R., 1933.

Bralliar's Branching. TB-B3D (Bralliar bef. 1933); Ashley, 1933.

BRALLIARS GIANT. TB-E-R7L (Bralliar bef. 1933); Ashley, 1933.

Bralliar's Giant Bicolor. TB-B3D (Bralliar bef. 1933); Ashley, 1933.

BRIGHT BALLOON. TB-Y4 (Waller 1933); Kellogg, 1934; R., 1930.

BRIGHTNESS. DB-E-Y4M (Emig. 1933); Kenwood, 1933; R., 1933.

BROCADE. TB-M-S9D (Berry 1933); R., 1932.

BURGUNDIAN. TB-E-RID (Dan. 1927); R., 1934.

CALIFORNIA GOLD. TB-M-Y4D (Mohr-Mit. 1933); Salb., 1933; R., 1933.

CALINDA. TB-M-S4L (Reibold 1933); Berry, 1933; R., 1933.

CAMPANILE. TB-M-B1M (Dan. 1927); R., 1934.

Candeur. TB-WW (Nonin bef. 1934); Bull. Men. de la Soc. Nat. d'Hort. de France, Mar., 1934, 133.

CARRARA. TB-M-WW (Doub 1933); Kellogg, 1933; R., 1932.

CASTALIA. TB-M-BIL (Wmsn. 1933); Long., 1933; R., 1933.

CHARLES HARDEE. Laev-MF-B1D (Nic.-Jr. 1933); R., 1933.

CHEF MENTEUR. Vinic-MF-B7D (Nic.-Jr. 1933); R., 1933.

COLUMBIA. TB-M-S7L (Dan. 1924); R., 1934.

CUDBEAR. TB-M-R1M (Doub 1933); Kellogg, 1933; R., 1932.

DAWNAVA. TB-M-S7M (Creamer 1933); R., 1933.

Degas. TB-S8L (Cay. 1933).

DELLA ROBBIA. Jap-Dbl-3 (Nes. 1933); R., 1933.

DRESDEN. IB-E-R8L (Richer 1933); Kellogg, 1934; R., 1932.

DRESDEN BLUE. Jap-Sgl-6 (Nes. 1933); R., 1933.

ECLAT. TB-MF-S4M (Gage 1933); Nes., 1934; R., 1933.

ELEANOR BLUE. TB-M-B1L (Salb. 1933); R., 1933.

ELECTRE CAYEUX. TB-S1L (Cay. 1931); R., 1933; *Electre*.

EL TOVAR. TB-R1 (Sass-J. 1933); R., 1929.

ELYSIAN. TB-Y4M (Saur. 1932); R., 1926; H. M., A. I. S., 1932; *Elesian*.

ENSATA GRANDIFLORA. Ens-B (Collect. Tibet).

ENSATA GRANDIFLORA ALBA. Ens-WW. Ohio State Bot. Gard., 1933.

ERMINE. TB-E-W2D (Richer 1933); Kellogg, 1934; R., 1932.

ESPLANADE. Fulv-MF-R8M (Nic.-Jr. 1933); R., 1933.

Faitii. Correvon 1933. Probably *taitii*.

FLORENCE ZACHARIE. Hex-radieristatae-MF-B1M (Nic.-Jr. 1933); R., 1933.
 FLYING CLOUD. Jap-Sgl-5 (Nes. 1933); R., 1933.
 FRENIER. Laev-MF-B7L (Nic.-Jr. 1933); R., 1933.
 FROST QUEEN. IB-M-FF-WW (Sass-H. P.; Hill-H. M., 1933); Hill-H. M., 1933; R., 1933.
 GEORGIAN BAY. Pris-MF-B7M (Nic.-Jr. 1933); R., 1933.
 GIGANTICAERULEA ALBA. Hex-radieristatae-MF-WW (Nic.-Jr. 1932); R., 1933.
 GLORIOLE. TB-F-B1L (Gage 1933); Nes., 1933; R., 1932.
 GOLD FLAKE. TB-W8D (Mur. 1933); Orp., 1933.
 GOLD FOAM. TB-Y4L (Nes. 1933); R., 1931.
 GOLD VELLUM. IB-F-Y4L (Gage 1933); Nes., 1934; R., 1933.
 GOLDEN HELMET. TB-F-S9M (Sass-J. 1933); R., 1933.
 GOLDEN LIGHT. TB-F-S4 (Sass-H. P. 1933); Nes., 1934; R., 1932.
 GRAECA. Jap-Dbl-5 (Waterer 1932); Waterer 1932 as *Nymphe*; R., 1933.
 GRAY CLOUD. DMB-E-S2M (Sass-J. 1933); R., 1933.
 Grey Dawn. TB- (Gotts. 1933); to be withdrawn.
 IBERVILLE. Hex-radieristatae-MF-B1M (Nic.-Jr. 1933); R., 1933.
 ICY GLOW. DB-E-W6M (Emig. 1933); Kenwood, 1933; R., 1933.
 IMPERIAL BLUSH. TB-F-R7L (Sass-H. P. 1933); Nes., 1934; R., 1932.
 IMWALD. TB- (G & K bef. 1933); Wass., 1933.
 INGENIEUR WINSSINGER. TB-S7D (Denis bef. 1933); Salb., 1933.
 JAMES ZACHARIE. Vinie-MF-B1D (Nic.-Jr. 1933); R., 1933.
 JEAN, VOILÀ JEAN. TB-E-R3D (Dan. 1927); R., 1934; *Jean Viola Jean*.
 JERRY. TB-MF-S9D (Lap. 1933); Nes., 1933; R., 1931.
 J. M. DUVERNAY. TB-S3M (Cay. 1933); *Duvernay*.
 KATISHA. TB-F-S9L (Hall 1933); R., 1932.
 KENWOOD. TB-S9D (Ayres 1933); Kenwood, 1933; R., 1931.
 KEYSTONE. TB-MF-R1M (McKee 1933); Nes., 1933; R., 1932.
 KHALASA. TB-B7D (Sher. 1933); Kellogg, 1933; R., 1931.
 KILSOQUAH. TB-E-S9D (Richer 1933); Kellogg, 1933; R., 1932.
 KING JUNIOR. IB-M-FF-B3M (Sass-H. P.; Hill-H. M. 1933); Hill-H. M., 1933; R., 1933; *Autumn King Junior*.
 KING PELLERES. Jap- (Waterer 1932); Waterer 1932 as *Ulysses*; R., 1933.
 KING PHILIP. TB-E-B7M (Fewkes 1933); Nes., 1933; R., 1932.
 Kumochi-Guma. Jap-Dbl-6D. Vaug., 1933.
 LAURA HUTCHESON. IB-M-FF-B3D (Sass-H. P.; Hill-H. M. 1933); Hill-H. M., 1933; R., 1933.
 LEO DELIBES. TB-S5D (Cay. 1933).
 LE VIEUX CARRE'. Fulv-MF-R7M (Nic.-J. 1933); R., 1933.
 LILY CREAMER. TB-M-S7L (Creamer 1933); R., 1933.
 Little Boy Blue. Sib-B1M (Cleve. 1932); Nes., 1933.
 LITTLE SMOKY. TB-M-B1D (Essig 1933); R., 1933.
 LONDON PRIDE. TB-R9L (Mur. 1933); Orp., 1933; R., 1933.
 LOUISIANA SUNSET. Fulv-MF-R7D (Nic.-Jr. 1933); R., 1933.
 MacDoners. Sib- Correvon 1933.

MADAME DARIDAN. TB-Y9M (Denis 1933); Cay. 1933; C. M., S. N. H. F., 1933.

MAGNA CHARTA. IB-F-W2D (Dan. 1931); R., 1934.

MALUSKA. TB-F-R7D (Nes. 1933); R., 1933.

MANDEVILLE. Hex-radieristatae-MF-B7L (Nic.-Jr. 1933); R., 1933.

MANET. TB-FF-S6D rev. (Cay. 1933).

MARGOT CASTELLANOS. Fulv-MF-R7L (Nic.-Jr. 1933); R., 1933.

MARIA CHAPPEDELAINE. TB-W2L (Cay. 1932); C. M., S. N. H. F., 1932.

MARMARGE. TB-M-B1M (Creamer 1933); R., 1933.

MARPESSA. Jap-Dbl-5 (Waterer 1932); Waterer 1932 as *Siren*; R., 1933.

MASQUE. TB-B3M (Cay. 1933); C. M., S. N. H. F., 1933.

MAYFAIR. TB-S9M (Mur. 1933); Orp., 1933; R., 1933.

MECCA. Jap-Sgl-3 (Nes. 1933); R., 1933.

MEHUL. TB-S4M rev. (Cay. 1933).

MINSTRING. TB-M-B1L (Creamer 1933); R., 1933.

MINTGER. TB-M-B1L (Creamer 1933); R., 1933.

Morphee. TB-B9D (Vilm. 1926).

MOUSQUETAIRE. TB-B1M (Cay. 1933); C. M., S. N. H. F., 1933.

Mozart. TB-S5M rev. (Cay. 1933).

MRS. CREAMER. TB-M-W7L (Creamer 1933); R., 1933.

MT. WHITNEY. Spur-W4 (Millik. 1933); So. Cal., 1933; R., 1933.

Murillo. TB-S6M rev. (Cay. 1933).

NATIONAL PROSPERITY. TB-B9D (National 1933); R., 1933.

NAVADAW. IB-M-S7M (Creamer 1933); R., 1933.

NEVA. Jap-Sgl-3 (Nes. 1933); R., 1933.

NORMA GAGE. TB-F-R1L (Gage 1933); Nes., 1933; R., 1932.

Oceana. TB-Y4M (Cay. 1933).

OCTOBER BLUE. IB-M-FF-B1M (Sass-H. P.; Hill-H. M. 1933); Hill-H. M., 1933; R., 1933.

OGLETHORPE. Laev-MF-B1L (Nic.-Jr. 1933); R., 1933.

Old Rose. TB- (Gotts. 1933); to be discontinued.

OLYMPIC. TB-EM-W1M (Berry 1933); R., 1933.

OMPHALE. TB-B9M (Cay. 1933); C. M., S. N. H. F., 1933.

OPAL BLUE. Sib-B1L (Sturt.; Nes. 1933); Nes., 1933; R., 1933.

ORIANA. TB-F-W1 (Sass-H. P., 1933); Nes. 1934; R., 1932.

Oriole. Spur-Y1L (San.-L. W. 1933); Cooley, 1933.

PALATLAS. TB-E-B7L (Creamer 1933); R., 1933.

PERSIAN PRINCESS. TMB-S7D (Dean 1933); So. Cal., 1933.

PINK JEWEL. IB-M-R7L (Salb. 1933); R., 1933.

PINK LOTUS. TB-F-R7L (Neel 1933); Orp., 1933; R., 1933.

PLURABELLE. TB-Y9M (Cay. 1933); R., 1933.

POINT ALA HACHE. Vinic-MF-B7D (Nic.-Jr. 1933); R., 1933.

PONTCHARTRAIN. Hex-MF-B7L (Nic.-Jr. 1933); R., 1933.

PRESIDENT LEBRUN. TB-S6D (Cay. 1933).

PRESIDENT PILKINGTON. TB-S1M (Cay. 1933).

PRINSES JULIANA. Eng-B3D (Byvoet 1928 (?)).
 PROFESSEUR MITCHELL. TB-B7D (Cay. 1933); C. M. & Spec. Prize,
 S. N. H. F., 1933; *Professeur S. B. Mitchell*.
 PURPLE GIANT. TB-B1D (Gage 1933); R., 1933.
 PURPLE NIGHT. TB-B7D (Richer 1933); Kellogg, 1933; R., 1931.
 PURPLUM. IB-F-R3D (Creamer 1933); R., 1933.
 RAE. TB-Y4M (Loth. 1932); Kellogg, 1934; R., 1930; H. M., A. I. S.,
 1930.
 RAFL. TB-Y9M (Mur. 1933); Orp., 1933; C. M., Iris Soc. (Eng.), 1931.
 RED BEAUTY. IB-M-R9M (Gage 1933); Nes. 1933; R., 1932.
 REDGLOW. TB-F-S9D (Essig 1933); R., 1933.
 RIALTO. TB-F-B1M (Bliss 1927); Orp., 1933.
 Romance. TB-B7M (Cay. 1933); C. M., S. N. H. F., 1933; Bull. Men. de
 la Soc. Nat. d'Hort. de France, Mar., 1934, 133.
 ROSE DUBARRY. Jap-Dbl-3 (Nes. 1933); R., 1933.
 ROSE MIGNON. Jap-Sgl-5 (Nes. 1933); R., 1933.
 ROXANE. TB-B9D (Cay. bef. 1932).
 SAN. DB-E-Y4L (Hires, inf. distrib. 1933); R., 1933.
 SANDY. IB-M-S5M (Creamer 1933); R., 1933.
 SARANOLE. TB-M-R7M (Creamer 1933); R., 1933.
 SARSEM. TB-M-R9L (Creamer 1933); R., 1933.
 Satan. TB-W3D (Cay. bef. 1932); C. M., S. N. H. F.
 SAZERAC. Fulv-MF-R7M (Nie.-Jr. 1933); R., 1933.
 SEDUCTION. TB-W5M (Cay. 1933); C. M., & Spec. Prize, S. N. H. F.,
 1933.
 SEMBAN. TB-M-B9M (Creamer 1933); R., 1933.
 SEMISAR. TB-M-R3L (Creamer 1933); R., 1933.
 SEPTEMBER SKIES. IB-M-FF-B7D (Sass-H. P.; Hill-H. M. 1933);
 Hill-H. M., 1933; R., 1933.
 SERBIAN MAJOR. TB-B3M (1933); Orp., 1933.
 SISTER. TB-F-R3L (Sturt. 1933); R., 1933.
 Sky-No-Ryo. Jap-Dbl-3. Burpee, 1933.
 SNOWMAID. Jap-Sgl-1 (Nes. 1933); R., 1933.
 SPANISH FORT. Hex-radieristatae-MF-B8L (Nie.-Jr. 1933); R., 1933.
 SPOKAN. TB-F-S9D (Sass-J. 1933); R., 1933.
 STANWIX. TB-F-B3M (Hall 1933); R., 1932.
 STORMY DAWN. DMB-E-S3L (Sass-J. 1933); R., 1933.
 SUNOL. TB-M-S4D (Mohr-Mit. 1933); Salb., 1933; R., 1933.
 SWEET AUBURN. TB-E-W7 (Fewkes 1933); Nes., 1933; R., 1932.
 SYLVIA LENT. TB-M-Y5L (Shull 1933); R., 1933.
 THEME. TB-S7M (Loth. 1933); Kellogg, 1934; R., 1930; H. M., A. I. S.,
 1930.
 THESEE. TB-W2M (Vilm. 1922); C. M., S. N. H. F., 1929; Bull. Men. de
 la Soc. Nat. d'Hort. de France, Mar., 1934, 133.
 THISTLEDOWN. TB-W9L rev. (Sturt. 1933); R., 1930.

TIMGAD. TB-W8D rev. (Cay. 1933); C. M., S. N. H. F., 1933.
TRISTE. TB-S9M (Mur. 1929); Orp. 1929.
UKIAH. TB-M-S9D (Essig 1933); R., 1933.
UNIVERSE. Jap-Dbl-3 (Burpee 1933).
VELVO. DMB-E-R3M (Sass-J. 1933); R., 1933.
Volupte. TB-R6M (Cay. 1933); C. M., S. N. H. F., 1933.
WAWASEE. TB-M-B1L (Richer 1933); Kellogg, 1934; R., 1932.
WESTLANDER. TB-M-B3D (Essig 1933); R., 1933.
WHITE LANCE. Spur-WW (San.-L. W.; Cooley 1933); Cooley, 1933.
WILBICO. TB-M-B9D (Creamer 1933); R., 1933.
WINTER SKIES. Jap-Sgl-7 (Nes. 1933); R., 1933.
Wisteria. Sib-B1M (And. 1933).
WONDERCHILD. TB-B9D (National 1933); R., 1933.
WOTAN. TB-M-B7D (Grinter 1933); Kellogg, 1934; R., 1932.
YELLOW BANKS. IB-M-Y5D (Richer 1933); Kellogg, 1934; R., 1932.
ZINGARELLA. TB-B7D (Cay. 1931).
ZOUALTA. TB-M-R2M (Creamer 1933); R., 1933.

EXHIBITION POLICY AND MANAGEMENT

Revised to January, 1934

The American Iris Society wishes to encourage the promotion of Iris shows by co-operating with local groups, garden clubs, horticultural societies, etc. This policy has proved so successful that over 135 shows have been held in all sections of the country during the last 14 years. Based on this experience the following revised pamphlet has been prepared.

Assistance may be extended both to special exhibitions of Irises and to establish organizations which will feature five or more Iris classes in their customary exhibits. Applications for co-operation should be made to the Chairman of Exhibitions as early in the year as possible.

Conditions of Co-operation

As the object of all exhibitions is to demonstrate the beauty of the Iris and to raise the standard of Iris in gardens, all authorized exhibitions must conform to the following regulations:

1. The proposed show schedule, and the list of proposed judges shall be submitted to the Exhibition Chairman for approval, not less than ten days before the show dates.

2. Amateur and commercial exhibitors shall show in separate classes. A commercial grower is defined as "One who catalogs, lists or otherwise advertises his or her productions for sale." In event that there are more commercial exhibitors than amateurs, at least three to five classes must be provided for the amateurs. Any person conforming to rules is eligible to compete.

3. Judges may withhold any award, if in their opinion it is not up to the required standard of excellence.

4. Requests for supplies must be in the hands of the Chairman not later than May 1st.

5. The name, American Iris Society, shall be used on all schedules and announcements, and due credit given for all assistance rendered.

6. Typewritten reports of the shows shall be forwarded to the Exhibition Chairman within two weeks after the show has been held.

7. Any award or other prize offered by the A. I. S. may be given only as specified in the accompanying schedule, recommendations for awards to seedlings shall be made only to those which are clearly distinct from or notably superior to any now in commerce or already registered.

8. The Board of Directors of the American Iris Society, upon the recommendation of the Exhibition Chairman, may refuse to award any authorized medal or other awards, where it is shown that any of the above rulings have not been complied with.

AWARDS OFFERED AT EXHIBITIONS

One Bronze Medal.

Silver Medals are intended for large shows, and require special authorization. The number each year is limited, and as it is the policy of the Society to distribute them in as many different sections as possible, they will not usually be given two years in succession for the same place.

One A. I. S. membership may be given to non-members, amateur, making the most comprehensive display in Group III.

A. I. S. Certificate of Honorable Mention for seedlings may be recommended to the Committee on Awards.

Both commercial growers and amateurs are eligible to exhibit in the seedling class, Group V.

SUPPLIES

The following supplies may be obtained from the Chairman of the Exhibition Committee at cost.

For the Show Committee

Entry Sheet for Secretary.	Award Cards.
Judging Cards.	1st Prize Cards.
Donation Vouchers.	2nd Prize Cards.
	3rd Prize Cards.

For the Exhibitor

Labels for varieties (small).

Posters for list of winners, and membership application blanks will be provided.

Entry cards.

The following Bulletins are suggested for display at exhibitions.

No. 11. Beardless Irises	\$.50
No. 13. Classification .....	.50
No. 28. Symposium .....	.50
No. 35. Test and Display Gardens .....	.50

The local committee will be charged with the bulletins ordered, and credited with such as are returned in good condition.

Available supplies will be forwarded and billed by the Exhibition Chairman, but checks should be made payable, and billed to the Treasurer of the A. I. S.

No other obligations are incurred by the Society except upon special action of the Board of Directors.

RECOMMENDATIONS

Awards noted above are offered by the American Iris Society. Any additional awards may be offered by the local committee as desired, with the exception that none may be offered for seedlings. Cash prizes are not prohibited, but it is suggested that ribbons, plants, receptacles, garden books, magazines, etc., are often equally or more desirable.

As heretofore a few nationally known nursery members have received most of the requests to donate plants for prizes, the members of local committees are asked to confine their efforts in this line to their immediate district.

The value of premiums, whether cash, stock value, or plants, should be comparable to the value of the respective classes.

SCHEDULE

The following schedule is arranged for an exhibition of the largest type. For smaller shows, certain classes such as Nos. 7, 16, 17, 21 and 22 may be selected and the number of prizes may be reduced as desired. From 20 to 25 classes are ample for the largest shows. Schedules may be typed, mimeographed, or printed as desired.

.....(Insert name of local Club)

in co-operation with the
American Iris Society

Schedule of Prizes for the.....Show

to be held
(where held)
(date)

(Subject to change owing to abnormal season)

Admission.....Everyone invited to compete

Notice of entries and other inquiries should be sent to "Iris Show Committee," care of.....

(give name and address) on or before
that the proper space may be reserved for each exhibitor.

All exhibits must be staged and ready for the judges at.....(the first day). Entries must be staged under number (obtained from the Secretary); exhibitors' names to be attached after the awards are made. Except in the artistic classes and in the seedling class, varieties must be named and should be correctly labeled. Any exhibit which includes other than the material specified in the schedule, either more or less, is subject to disqualification.

No exhibitor shall receive more than one premium in any ~~one~~ Iris class. If no competition develops, an exhibitor may be required to enter the nearest similar class. Any prize may be withheld at the discretion of the judges, whose decision shall be final.

With the exception of the artistic arrangement classes all flowers shall have been grown by the exhibitor.

Standards of Excellence For Collections

Apply to Exhibit as a whole	{	Variety of height and color according to section.....	25
		General quality	25
		Condition (freshness of blooms, etc.).....	25
		Appropriate to schedule, naming, etc.....	25
			<hr/>
			100

In case of close competition judge each vase in accordance with the standards of excellence for an individual variety.

For Artistic Arrangements

Arrangement	25
Color harmony	20
Quality of blooms	20
Relation of receptacle	15
Distinctiveness	10
Appropriate to statement of schedule	10
<hr/>	
100	

For Individual Varieties, All Garden Varieties, and Seedlings

The following scale of points shall be used for judging seedlings at exhibitions:

25%	{	Quality	15
		Condition	10
Flower 50%	{	Color	15
		Form	10
		Substance and Texture	10
		Size according to variety	10
		Fragrance	5
Stalk 25%	{	Poise and grace according to section.....	10
		Number of blooms and buds according to sections.....	5
		Height according to section.....	5
		Branching according to section.....	5
			<hr/>
			100

Exhibition Committee recommends that the seedlings be judged by at least 3 accredited judges.

Note: Standards of excellence can be applied to Dwarfs, Intermediates, Beardless, Bulbous Iris, etc., as well as to Tall Bearded, if due allowance is made for the variations characteristic of the respective sections.

Sweepstake (Medal or Cup)

The exhibitor winning the most points in the Iris Division to be awarded theMedal of the American Iris Society.

Where both the Silver and the Bronze Medals are authorized, the Silver Medal should be awarded for the most points won, and the Bronze Medal may be awarded to the exhibitor scoring the second highest number of points, or as a sweepstake in Group III, but requests for placing this on other classes will be considered. Where the exhibition is large enough to warrant both the Silver and Bronze Medals, one should be awarded in the amateur classes and the other in the commercial.

Group I

Beardless Iris Classes

No. 1. Collection of Irises, not Bearded (including *sibirica*, *cristata*, etc.) 1 to 3 stalks of each variety, 3 prizes. Point score 5—3—1.

No. 2. Collection of Bulbous Irises (including Spanish, English, etc.) 1 to 3 stalks of each variety, 3 prizes. Point score 5—3—1.

No. 3. Collection of 6 distinct varieties of Irises, *sibirica* or *orientalis*, 3 stalks each, 3 prizes. Point score 5—3—1.

Note: In large exhibits classes may be added by specifying separate colors, heights and sizes.

No. 4. Artistic display of not more than 25 stalks of Beardless Irises, with own foliage, 3 prizes. Point score 10—5—3.

No. 5. Artistic display of not more than 10 stalks of Beardless Irises, with or without other hardy flowers and foliage, 3 prizes. Point score 5—3—1.

Bearded Irises

No. 6. Artistic display of not more than 25 stalks and not more than 5 varieties of Bearded Irises, with or without other flowers and foliage, 3 prizes. Point score 10—5—3.

No. 7. Artistic display of not more than 10 stalks of Bearded Irises, with own foliage, 3 prizes. Point score 5—3—1.

No. 8. Artistic display of Irises suitable for rock gardens, with other rock plants, using tray.....(size), 3 prizes. Point score 10—5—3.

No. 9. Artistic display of 10 stalks or more of one variety of Bearded Irises, to suggest the effect of a garden clump (lifted plants are barred), 3 prizes. Point score 5—3—1.

In classes for artistic arrangements, receptacles must be provided by the exhibitors at their own risk. Material need not be grown by the exhibitor. Specify the type of container to be used in each class (e. g., baskets might be used in Class No. 6; low dishes in Class No. 7) as it is very hard to judge artistic arrangements when exhibits in one class are shown in different types of containers.

The following Classes open to Bearded Irises only:

- No. 10. A.** Specimen stalk, self-colored white, 3 prizes. Point score 5—3—1.
B. Specimen stalk, white plicata, 3 prizes. Point score 5—3—1.
C. Specimen stalk, white bi-color, 3 prizes. Point score 5—3—1.
- No. 11. A1.** Specimen stalk, self-colored, lavender, light blue or mauve. Point score 5—3—1.
A2. Specimen stalk, lavender, light blue or mauve bi-color. Point score 5—3—1.
A3. Specimen stalk, self-colored, dark blue, red purple, or blue purple. Point score 5—3—1.
A4. Specimen stalk, dark blue, red purple, or blue purple bi-color. Point score 5—3—1.
B1. Specimen stalk, self-colored pink, 3 prizes. Point score 5—3—1.
B2. Specimen stalk, pink bi-color, 3 prizes. Point score 5—3—1.
C1. Specimen stalk, self-colored red, 3 prizes. Point score 5—3—1.
C2. Specimen stalk, red bi-color, 3 prizes. Point score 5—3—1.
- No. 12. A.** Specimen stalk, light blends, 3 prizes. Point score 5—3—1.
B. Specimen stalk, dark blends, 3 prizes. Point score 5—3—1.
- No. 13. A.** Specimen stalk, self-colored yellow, 3 prizes. Point score 5—3—1.
B. Specimen stalk, yellow plicata, 3 prizes. Point score 5—3—1.
C. Specimen stalk, yellow bi-color, 3 prizes. Point score 5—3—1.

(Follow latest A. I. S. classification in making entries in Specimen Stalk classes.) (Bi-color refers to a **marked** contrast of tone or color between standards and falls such as is often due to the velvety quality of the fall.)

Group II

(Not open to Exhibitors in Group III)

- No. 14.** Collection of 50 distinct varieties, 1 stalk of each, 3 prizes. Point score 40—20—10.
- No. 15.** Collection of 25 distinct varieties, 1 stalk of each, 3 prizes. Point score 20—10—5.
- No. 16.** Collection of 12 distinct varieties, 3 stalks of each, 3 prizes. Point score 10—5—3.
- No. 17.** Collection of 6 distinct varieties, 3 stalks of each, 3 prizes. Point score 5—3—1.

Group III

(Not open to Exhibitors in Group II)

No. 18. Collection of 10 distinct varieties, 1 stalk of each, 3 prizes. Point score 10—5—3.

No. 19. Collection of 5 distinct varieties, 3 stalks of each, 3 prizes. Point score 5—3—1.

No. 20. Collection from garden containing not over 25 varieties, 3 prizes. Point score 6—3—1.

No. 21. Collection containing no variety priced at over 50c, 3 prizes. Point score 6—3—1.

No. 22. Collection shown by exhibitor who has not previously exhibited at a local A. I. S. show, 3 prizes. Point score 6—3—1.

Best specimen in Group III—Point score 10—5—3.

Group IV

Group Exhibit by a Garden Club or Society

No. 23. Display of at least 10 varieties of Irises, with or without other hardy flowers and foliage to cover at least 15 sq. ft. (3' x 5'). Two honorary prizes.

Group V

COMMERCIAL CLASSES

No. 23. A. Displays covering not more than 50 sq. ft. Point score 40—20—10.

No. 23. B. Best specimen, to be chosen from display. Point score 10—5—3.

No. 23. C. Artistic display of not more than 25 stalks and not more than 5 varieties of Bearded Irises, with or without other flowers and foliage. Point score 10—5—3. Type of prizes to be determined.

Specimen classes from No. 10 A. to No. 13 C. inclusive may be used in the commercial class.

Group VI

Seedling Iris

(Open to All Exhibitors)

No. 24. Judging at Exhibitions.

Judges may make recommendation for Highly Commended:

At exhibitions in cooperation with the American Iris Society under the following regulations:

Irises raised from seed by exhibitors, but not introduced to commerce. (If the originator is unable to be present he may request another person to exhibit for him, in which case if an award is made it will be sent to the originator instead of the exhibitor.) From one to five flower stalks of each seedling must be shown preferably with some of its own foliage. Judges are instructed to give greater weight to seedlings of equal merit where more

stalks (up to the limit of five) are shown. It is recommended that no one exhibitor should enter more than five seedlings, and it is further requested that if possible the accredited judges do not recommend more than five Highly Commendeds at any one show. (As the Society does not offer prizes for seedlings, none may be offered by individuals or clubs at any show receiving the American Iris Society cooperation.)

Group VII

The following classes are suggested for Special Shows of Japanese Iris, or they may be used in connection with other flowers blooming at the same time:

Class 29. Collection Japanese Irises, one stalk each variety. Three prizes. Point score 20—10—5.

Class 30. Japanese Irises, 3 to 6 stalks one variety. 3 prizes. Point score 10—5—3.

Class 31. Specimen stalk Japanese Iris, white. 3 prizes. Point score 5—3—1.

Class 32. Specimen stalk Japanese Iris, purple. 3 prizes. Point score 5—3—1.

Class 33. Specimen stalk Japanese Iris, pink. 3 prizes. Point score 5—3—1.

Class 34. Specimen stalk Japanese Iris, blue tones. 3 prizes. Point score 5—3—1.

Class 35. Specimen stalk Japanese Iris, splotted or striped. 3 prizes. Point score 5—3—1.

Class 36. Artistic arrangement in the Japanese manner in a low receptacle. 3 prizes. Point score 5—3—1.

Class 37. Artistic arrangement of not less than 15 stalks with other flowers and foliage. 3 prizes. Point score 5—3—1.

For a large show sub-divide various Japanese Iris classes as desired into A, single, B, double.

Also add any one or all of classes 1—5 if season warrants.

Show Management

Show management may be divided as follows:

MANAGER

Entry	Classification	Staging	Publicity
Secretary	Classification	Chairman	Press
Asst. Secretary	Committee	Staging	Committee
		Committee	

Duties of the Show Manager

The Manager shall have general supervision of the hall, arrangement of tables, exhibits, etc., but should have no detail to attend to during the show, as general supervision is necessary.

He shall instruct the various subcommittees and assistants in their duties.

Duties of the Show Secretary and Assistants

The Show Secretary should send notices to prospective exhibitors two weeks in advance, enclosing entry cards. Those cards with the classes listed which the Exhibitor intends to enter should be returned to the Secretary or Manager as early as possible.

On the day of the show the Secretary shall have all his records at a convenient desk and shall turn over entries to staging committee, and shall receive reports of judges; prepare a list of winners and report of the show giving copies to the Press Committee and to the A. I. S. Exhibition Chairman.

An Assistant Secretary shall wait on the judges, placing award cards, etc.; a complete list of winners shall be posted.

The Secretary should take notes on the show, collect all available press notices, etc., and should forward immediately a full report of the show to the chairman of the A. I. S. Exhibition Committee.

Prize cards or ribbons should be sent to the winners, together with donation vouchers or other proof of awards.

Duties of Classification Committee

The Classification Committee shall help each exhibitor to place his or her flowers in the proper classes and to label them correctly.

This Committee should see that all exhibits are in accordance with the requirements of their schedule before they are submitted to the judges.

Duties of the Staging Committee

Sometime before the show the Staging Committee shall make a map of the hall and of the arrangement of the tables, marking thereon the space and location allotted to each class. Suitable containers filled with water shall be provided, except in classes for artistic arrangement.

On the day of the show members of the Committee shall mark the tables with class numbers and specifications; shall direct the exhibitors to the proper tables; see that the staging is completed at the proper time. All exhibits receiving awards should be conspicuously designated.

Duties of Publicity Committee

When a show has been planned articles and notices should be given to the press from time to time. Announcements at public meetings or at Moving Picture Theatres, as well as posters and occasionally hand bills, are other means of publicity. Announcements of exhibitions will be included in the A. I. S. Bulletins. Lists of winners, etc., shall immediately be sent to the press.

Suggestions to the Show Committee

An exhibit should not last over two days. Early on the second day dead and dying flowers and stalks should be removed. Additional exhibits (non-competitive) may be added.

All decorations in the exhibition hall should be done well in advance of the arrival of the exhibitors. Wherever possible a hall should be secured that does not need artificial light in the day time, as even the best artificial light distorts the color of the flowers.

See that specimen stalk classes are in accord with the latest classification of the A. I. S.

A committee to assist exhibitors in arranging their flowers is essential.

State clearly at what hour exhibitors may begin, and must finish, staging, and at what hour they may remove their exhibits.

State clearly at what hour the public will be admitted and at what hour the show closes.

During the entire show an official should be at an information desk to answer questions, whether admission is charged or not.

A. I. S. Membership Blanks and Bulletins (especially the numbers on Iris culture and species) should be prominently displayed, either on the Secretary's desk or at a specially prepared booth or table, where interested visitors wishing to become members of the Society could fill out the application blank and receive information about the work being done by the Society.

Judges

Secure your judges early. Remember that the accredited judges are busy men and women, who usually have their plans for the season made far ahead, and that it is often impossible to alter these plans at a late date, no matter how much they might like to be of assistance to you.

Judging should commence **punctually** at the time appointed, and the rule fixing the time for the conclusion of the staging should be **strictly enforced**. In large shows the different classes should be divided among a number of judges.

The place of exhibition should be cleared of everyone except authorized persons before the judges begin their duties; no exception must be made to this rule in the case of officials who are also exhibitors. If possible, the judges should not be allowed in the hall in advance, and should be interrupted in no way while judging. Judging should always occur the first day immediately after the flowers have been staged.

One to three competent judges are sufficient, although arrangement classes may be separately judged by a committee selected for that purpose. The decisions of the judges shall be final and they shall sign all judges' cards.

Judges' expenses should be paid by the local Club.

Any unusual stipulation in the schedule should be brought to the attention of the judges.

Suggestions to Exhibitors

Note very carefully and observe strictly the conditions in the schedule as to the time named for the judges to commence their duties.

An exhibitor should study carefully the standards of excellence, the rules for judging, and the wording of the classes, as the better he appreciates the requirements the finer his exhibit. Bear distinctly in mind that one item more, or one less, disqualifies, and that no judge has the right himself to rectify the errors of a competitor.

Read carefully all sections of the rules which in any way relate to your proposed exhibit and, if you have any difficulty in understanding them, write to the Secretary of the show at least a week before it takes place.

Each exhibitor should plan his classes and color arrangements as he picks the flowers, labeling carefully all varieties before packing. A friend as an assistant in the actual staging will prove worthwhile.

Remember that the judges do not know whose exhibits they are scoring and have no reason to judge other than on the merits of the case.

Handling of Flowers for Exhibition

Although Irises are not easily handled as cut-flowers, practically all winners of the past few years were the veriest amateurs in staging. Never trust your flowers to express, transport them either by hand or by automobile. Always pack twice the number of stalks you wish to exhibit.

One method is to pick late the previous afternoon and pack the following morning in 8x10x48 inch boxes, across which tape has been latticed. The stalks cut full length are laid and then pinned in place with tape so that the flowers are held firmly, yet well apart. In this way perfect blooms, fully blown, may be carried, perhaps 30 to 40 to a box.

Another method is to pick rather close buds the previous morning, tie into bunches, and place in water in a cool, dark room until the following morning, when they are laid carefully and tied firmly into the boxes. There is a small chance of the flowers not opening in time to be judged.

An arrangement of chicken wire (1-inch mesh) in and over the top of pails permits carriage of 12 to 15 stalks in full bloom in a closed car.

Iris flowers, when cut in bud and just showing color, have been kept in cold storage (at a temperature suited to potatoes) as long as six weeks. The stalks are stood in shallow water in a pail and carefully packed in moss. Often putting ice in the exhibition vase keeps the flowers in condition for a longer period.

Whatever the method, tie your stalks or bunches firmly against the box as buds are brittle and flowers bruise easily by contact. Transport your boxes with the utmost care and keep in mind that an exhibit of broken flowers is worse than none.

Whenever possible, arrange your exhibits in the exhibition room the evening before the show opens, thus allowing the buds to open without the danger of breakage. Wilted flowers, broken

or lost petals all detract from the exhibit. In any exhibit correct amount of material and its condition are the first points to be considered by the judges.

Mixing large and small specimens together weakens the exhibit.

There is more honor in exhibiting well in a strongly contested class and losing than in winning a prize with weak products in a class in which there is little or no competition.

Suggestions to Judges

Read carefully the rules and conditions printed in the schedule and note any unusual stipulations.

Note the number of exhibitors in each class and take a general survey of the exhibits.

Judges should be very careful not to make awards that are not merited. If an exhibit is not up to the required standard, the judges may "leave a note" explaining why no award was made. This method may help the exhibitor to do better next time.

If the judges, being even in number, are unable to agree, they should call in some properly qualified person to decide between them, and at once abide by his casting vote.

As far as possible judges should refrain from entering the exhibition hall in which they will have to judge until their official duty actually commences.

Judges may encourage good exhibits below the prize winners by awarding a "Highly Commended" card.

A. I. S. Medals cannot be engraved and delivered before September 15th, at the earliest. Horticultural Societies often do not make cash payments until the following January 1st. Nurserymen may not deliver stock until fall. Vouchers calling for payment in cash or stock should be signed by the local Chairman, and if procured through the agency of the A. I. S. must also be signed by the representative of the Society.

Suggestions drawn from your experience either as to the handling of flowers or the management of exhibits will prove a valuable and most welcome contribution to our work.

Subject to the approval of the Board of Directors, the Chairman of the Exhibition Committee is empowered to accept or refuse requests for co-operation; to approve or disapprove schedules and judges, and to establish such additional rules as may be required. The Chairman will consult the Board as required and forward proper information and authorization.

Address all communications to
Chairman of Exhibition Committee,

1934 POLICY OF AWARDS

1. The following regulations cancel all previous regulations in reference to awards.

2. The Board of Directors shall appoint accredited judges in various parts of the country. These judges are requested to send reports, ratings and recommendations on new Irises to the subcommittee on tabulation, care of Donald B. Milliken, 970 New York Avenue, Pasadena, California, not later than July 15th. The subcommittee shall tabulate the reports and furnish complete information to the Board of Directors on or before September 15th. In compiling ratings, the section west of the Rocky Mountains will be kept separate. The numerical averages will then be translated into symbol letters as follows: 90 or over A; 85 to 89 inclusive, B; 80 to 84 inclusive, C; 70 to 79 inclusive, D. No rating of a variety will be published unless it has been voted on by at least five (5) judges. It will be the policy of the Board to keep as confidential all reports of the judges. An individual judge may, however, use his own discretion about giving out his own ratings. The subcommittee on tabulation shall have the power to throw out any flagrantly unjust votes.

3. The accredited judges shall, on or before July 15th send to the Subcommittee on tabulation their recommendations for Highly Commended, for Honorable Mention and for Award of Merit.

4. After having seriously studied the reports of the judges, the Board of Directors is given full power to make the Awards of Merit without being bound to follow the judges' recommendations except as expressly designated in the following regulations:

DIRECTIONS FOR ACCREDITED JUDGES

5. In all reports judges should state approximate number of stalks judged; whether judging was done in one or in more than one garden; and place or places of judging should be stated. Obviously a recommendation from a judge who has seen but one stalk in one garden on one day cannot be given as great weight as a recommendation from a judge who has seen several clumps on several different days in one garden or in several different gardens and/or in widely separated places in different climatic sections.

6. Judges are requested:

Not to vote on their own seedlings or on varieties which they are introducing.

Not to make ratings if they see new varieties which are plainly poorly grown or which have only been planted one year and are not fully established.

Not to make ratings on seedlings in breeders gardens if breeder requests that no rating be made on the variety.

Not to be too severe in any one garden if it is evident that the growth in the whole garden is bad, or if judging takes place too early or too late in the season, or immediately after bad storms and unusually hot weather.

ADDITIONAL SUGGESTIONS

It is requested that each judge take special pains to watch for the following faults:

Lack of substance.

Fading of color.

Spotting from rain or dew.

Buds turning in toward stalk.

Too heavy stalk as it lack grace.

Too weak stalk tending to collapse.

Weak midrib in standard. Even in thin standard will often hold up when supported by a heavy midrib.

Puckering and turning back of falls. Too narrow a haft.

Blooms too big or too small for the height of stalk.

Bunching of flowers at top of tall stalk and no branching lower down.

Crowded bloom on stalk. The ideal stalk is one not too heavy, with flowers well spaced on nice branches so that the profile of each flower may be seen distinctly.

Poor habit of growth. Plants should make regular increase, give bloom yearly and have good foliage—at least during the blooming season.

7. Irises which have already received awards by the American Iris Society may be included in the list of ratings, but should not be again recommended except for a higher award.

8. Judges may send in ratings on Irises which are not yet in commerce and on Irises introduced during the current year or during the two previous years.

9. *Judging at Exhibitions:*

Judges may make recommendation for Highly Commended:

At exhibitions in cooperation with the American Iris Society under the following regulations:

Iris raised from seed by the exhibitor, but not introduced to commerce. (If the originator is unable to be present he may request another person to exhibit for him, in which case if an award is made it will be sent to the originator instead of the exhibitor.) From one to five flower stalks of each seedling must be shown preferably with some of its own foliage. Judges are instructed to give greater weight to seedlings of equal merit where more stalks (up to the limit of five) are shown. It is recommended that no one exhibitor should enter more than five seedlings, and it is further requested that if possible the accredited judges do not recommend more than five Highly Commendeds at any one show. (As the Society does not offer prizes for seedlings, none may be offered by individuals or clubs at any show receiving the American Iris Society cooperation.)

The following scale of points shall be used for judging seedlings at exhibitions:

Twenty-five Per Cent	
Quality	15
Condition	10
Flower Fifty Per Cent	
Color	15
Form	10
Substance and Texture	10
Size according to variety	10
Fragrance	5
Stalk Twenty-five Per Cent	
Poise and grace according to section	10
Number of blooms and buds according to section	5
Height according to section	5
Branching according to section	5
<hr/>	
100	

10. *Judging in Gardens.*

Accredited judges may, alone or in groups, visit gardens and nurseries. They may send in ratings on Irises which are not yet in commerce and on Irises introduced during the current year or

during the two previous years. Recommendations for Honorable Mention shall be made only to Irises not introduced or for Irises introduced during the current year or during the two previous years. Recommendations for Award of Merit shall be made only to Irises officially registered and which shall have been in commerce at least one and preferably two or three years AND which have in previous years been recommended for Honorable Mention.

Recommendations for the Dykes Medal shall be made only to Irises officially registered and which have been in commerce five years. In 1934 this five year period shall be considered to cover Irises introduced in 1929, in 1935 Irises introduced in 1930, etc. Under American Iris Society rules introduction consists of publicly offering plants for sale at a stated price in a catalog or advertisement. Sales in a garden or by letter do not consist of introduction. As the Dykes Medal has already been given to a 1929 variety, the Board of Directors has voted not to make this award in 1934.

All the above are for Irises originating in America.

Judges may also recommend Awards of Merit for any foreign Irises introduced during the past five years (in 1934 this would mean introduction of and since 1929.)

11. All judges are expected to use the following scale of points for judging in gardens :

	(a) Clarity	10	}	25
	(b) Brilliancy	7		
I	COLOR	(c) Richness or Delicacy	5	
		(d) Novelty	3	
	(a) Substance	7	}	20
II	QUALITY	(b) Texture	5	
		(c) Weather resistance....	5	
		(d) Fragrance	3	
	(a) Massing	5	}	15
III	GARDEN VALUE	(b) Carrying quality	5	
		(c) Extension of season....	5	
IV	FORM			10
V	VIGOR			10
VI	FLORIFEROUSNESS			10
VII	STALK			10
				<hr/>
				100

12. *Definitions*

1. *Color*

- (a) *Clarity*: A clear rather than a muddy color. Even in blends the combination should be of clear colors.
- (b) *Brilliancy*: A brilliance of color that makes the flower outstanding among others of similar type.
- (c) *Richness*: Depth of velvety appearance or rich combination of colors.
Or *Delicacy*: Delicate or ethereal quality of color.
- (d) *Novelty*: A distinct or novel color not hitherto well known in Iris.

2. *Quality*

- (a) *Substance*: Thickness of petals which give flower rigidity and poise.
- (b) *Texture*: Surface appearance of parts of the flower.
- (c) *Weather Resistance*: Having that quality that enables the flower to withstand the vicissitudes of weather, hot scorching sun, thunderstorms, winds, etc.
- (d) *Fragrance*: A pleasing perfume.

3. *Garden Value*

- (a) *Massing*: Giving a pleasing appearance when a number of plants are planted in a mass. Enough flowers should be open at one time and they should not be too crowded.
- (b) *Carrying Quality*: Color bright enough to be effective at distance. That quality that makes the variety stand out in the average garden.
- (c) *Extension of Season*: Not only varieties staying in bloom a long time but also very early or very late sorts.

4. *Form*: Proportion and shape of flowers as a whole. A harmonious and well-balanced flower is desirable.

5. *Vigor*: Hardiness (according to climate). Strength of growth and reasonably rapid increase. Resistance to disease. Foliage should be healthy color and in size and keeping with plant as a whole.

6. *Floriferousness*: Free and reliable bloomers with many stalks of flowers. Not apt to be shy bloomers in unfavorable seasons.

7. *Stalk*

- (a) *Poise*: The judge must consider whether the stalk is attractive as a whole, including sufficient strength to prevent necessity of staking under ordinary circumstances.
- (b) *Grace*: It is desirable that stalks while strong should not be too coarse, or too slender, too heavy or too rigid for pleasing appearance. Under this heading should be considered also height and weight of stalk in relation to size and number of flowers.
- (c) *Placing*: This refers to position of branches. It is desirable that the branches be pleasingly placed along the stalk instead of being too much bunched at the top.

Note:—These Standards of Excellence can be applied to all types of Irises if due allowance is made for the variations characteristic of the respective sections.

In order to facilitate the work of tabulation, all judges are requested to make all their returns on the uniform loose leaf forms which are furnished to them.

DIRECTIONS FOR BOARD OF DIRECTORS

13. *Highly Commended*

The Board of Directors shall give Highly Commended to varieties receiving three or more recommendations from the accredited judges subject to the regulations in paragraph 9 above.

14. *Honorable Mention*

The Board of Directors shall give Honorable Mention to varieties receiving five or more recommendations from the accredited judges and subject to the regulations in paragraph 10 above.

15. *Award of Merit*

The Board of Directors may give not more than five American Awards of Merit yearly. Such awards shall be given only upon the recommendation of at least seven accredited judges, and subject to the regulations in paragraph 10 above. Such award shall not be given an Iris which all or most of the judges saw in the same garden and preference shall be given to those seen in widely scattered sections.

16. *Dykes Memorial Medal*

The Iris Society of England has offered to the American Iris Society the Dykes Memorial Medal yearly. This is the highest award that can be given to a new Iris. Upon the recommendation of seven or more accredited judges and subject to the regulations in paragraph 10 above, the Committee on Awards may award this medal yearly subject to the confirmation of the Board of Directors. The medal should go to an Iris widely distributed and judged in widely scattered sections. As stated above this medal will not be awarded in 1934.

All of the above refers to Iris originated in America. In addition the Board of Directors may give not more than five Awards of Merit yearly to Irises of foreign origin. Such awards shall be given only upon the recommendation of at least seven accredited judges and subject to the regulations in paragraph 10 above.

Accredited judges should send all ratings and recommendations to

DONALD B. MILLIKEN,
970 New York Avenue,
Pasadena, California

on or before July 15th.

MEMBERSHIP LIST, OCTOBER 1, 1934

Members have been listed by States, grouped within the States by an alphabetical arrangement of cities, and if one or more members live in the same city, they too are listed in alphabetical order. This arrangement gives the reader the advantage of knowing how many members may be found in any particular locality.

The date before the name gives the year of joining as in our records. If there are errors here, please report to the Secretary. H indicates Honorary members; C, Charter members, 1920; L, Life members.

ALABAMA

- 1931—Wm. F. Cahoon, 1140 11th Ave., So. Birmingham
- 1921—Samuel L. Earle, 1223 Niazuma Ave., Birmingham
- 1934—Mrs. R. M. Goodall, Sr., 17 Glen Iris Park, Birmingham
- 1934—William J. Rushton, Box 1751, Birmingham
- 1933—Mrs. Oscar G. Thurlow, Box 440, Route 2, Birmingham
- 1934—Mrs. H. M. Sallee, Letohatchee
- 1931—Mr. George B. Rogers, 1213 Selma St., Mobile
- 1934—Dr. J. L. Bowman, City Building, Montgomery
- 1934—Mrs. George F. Scruggs, 500 Lauderdale St., Selma

ARKANSAS

- 1931—Mrs. J. M. Baker, Cedar Lodge, Berryville
- 1934—Joseph B. Youmans, Emmet
- 1934—Mr. Fred B. Smith, 140 Booker St., Little Rock
- 1934—Mr. J. C. Rose, Route 4, Russellville

CALIFORNIA

- L—Mrs. Anson S. Blake, Arlington & Rincon Sts., Berkeley
- 1923—Prof. E. O. Essig, 910 Hilldale Ave., Berkeley
- L—Sydney B. Mitchell, 633 Woodmont Ave., Berkeley
- 1925—Mr. Carl Salbach, 657 Woodmont Ave., Berkeley
- University of California, Berkeley
- 1934—Mr. Basil D. Miller, 180 K St., Chula Vista
- 1932—Mr. John A. Monroe, 730 Fourth Ave., Chula Vista
- 1932—Mr. Frank R. Reinelt, Capitola
- 1932—Library Branch of the College of Agriculture, Davis
- 1934—Mrs. George T. Goodhue, Route 2, Box 733, Fresno
- 1933—Mr. W. H. Kingsley, Eden Gladiolus Gardens, Hayward
- 1934—Mrs. Emma Gobbi, Route 3, Box 114, Healdsburg
- 1934—Mr. Willard Wehmueller, Box 80, Hollister
- 1927—Lorraine Cerf, Holt, San Joaquin County.
- 1925—Elizabeth Hardee Iris Gardens, Kentfield
- 1931—Germain Seed and Plant Company, Arcade Station P.O., Los Angeles
- 1933—Dr. Eric E. Nies, 1423 N. Kingsley Drive, Los Angeles

1933—Mrs. Henry F. Prince, 753 S. Oxford Ave., Los Angeles
 1930—Mrs. L. E. Perkins, 175 N. Magnolia Ave., Monrovia
 1925—Mrs. C. S. Goodman, 1915 Tenth Ave., Oakland
 1934—Mrs. Russell D. Dysart, 134 Princeton St., Ontario
 1931—Stanley Forbes, 1151 University Ave., Palo Alto
 1934—Mr. Donald B. Milliken, Southern California Iris Gardens, 970 New York Ave., Pasadena
 1927—Mr. Robert T. Moore, Route 1, Box 28-A, Pasadena
 1931—Mr. F. E. Reibold, 1395 Linda Vista Ave., Pasadena
 1924—Frank F. Williams, Jr., M. D., 7 Centre Drive, Patton
 L—Mr. Clarence G. White, Sunset Drive at Mariposa, Redlands
 1921—Miss Meda Hinckley, Route 2, Box 288, Redlands
 1933—Mr. Albert P. Vanselow, 4607 Rubidoux Ave., Riverside
 1931—Mrs. G. G. Pollock, 1341 45th St., Sacramento
 1932—Mr. C. M. Troxel, 3161 Y St., Sacramento
 1927—Mrs. Lena M. Lothrop, 826 D St., San Bernardino
 1934—Mrs. Florence P. Brant, 4054 Florida St., San Diego
 1927—San Diego Floral Association, Box 323, San Diego
 1934—F. G. Weisman, 1487 17th Ave., San Francisco
 1928—Miss Ruth Rees, 1059 Bird Ave., San Jose
 1921—Mrs. Jemima Branin, Box 562, San Lorenzo, Alameda County
 1927—Mrs. Beatrix Farrand, 1650 Orlando Road, San Marino
 L—James B. Smith, El Nido, Burlingame, San Mateo
 1931—C. R. Lehman, Box 83, Santa Rosa
 1934—Miss Arlen Luvano, Springville
 L—James M. Perry, Star Route, Upper Lake
 1933—Mrs. Louis F. Vaile, Vacaville
 1925—Mrs. A. B. Welch, Woodland

COLORADO

C—Mr. D. M. Andrews, Box 493, Boulder
 1925—Mrs. Edw. L. Kernochan, 1926 Wood Ave., Colorado Springs
 1930—K. N. Marriage, Upton Gardens, Colorado Springs
 1923—Dr. P. A. Loomis, 1414 Culebra Ave., Colorado Springs
 1934—P. H. Graham, 1730 Glencoe Ave., Denver
 1934—Miss Florence A. Wilkins, Walden

CONNECTICUT

1931—F. S. McDaniel, Box 1032, Bridgeport
 1925—Mrs. William Bassett, Cheshire
 L—Carl Oscar Carlson, Fairchild
 1928—Mrs. William Darrach, Box 622, Greenwich
 1923—Mrs. Walter Pierson, Buecleuch, North St., Greenwich
 L—Mrs. Z. G. Simmons, Clapboard Ridge Road, Greenwich
 1920—Mr. George R. Goodwin, 181 Elizabeth St., Hartford
 1931—Mr. E. A. Piester, Dept. of Parks, Municipal Bldg., Hartford
 C—Miss Frances R. Ives, 391 Broad Street, Meriden
 1927—Mrs. Charles S. Myers, Box 83, Nangatuck
 1928—Miss Ruth M. Adt, Box 81, Westville Station, New Haven

- 1927—Garden Club of New Haven, Mrs. R. W. Tuttle, Treasurer, 161
Linden St., New Haven
C—Mrs. E. H. Jenkins, 108 E. Rock Road, New Haven
1928—Marsh Botanical Garden, Prof. G. E. Nichols, Yale University,
New Haven.
L—John B. Wallace, Jr., 129 Church St., New Haven
1931—Mrs. Julia C. Wallace, 436 Prospect St., New Haven
1927—Ralph G. Van Name, 168 Prospect Street, New Haven
L—Miss Theodore Van Name, 60 Lincoln St., New Haven
1931—Connecticut College, Department of Botany, New London
C—Mrs. Colin M. Ingersoll, Evergreen Farm, Salisbury
1927—Roland M. Patch, Connecticut Agricultural College, Storrs
1934—Willard M. Kellogg, 60 N. Main St., West Hartford
1925—Mrs. Louise M. Kellogg, 60 Main St., West Hartford
C—Mrs. E. W. Abrams, Old Place, Woodbury
1933—Mr. Carl W. Clark, Woodbridge

DELAWARE

- 1931—Mrs. F. W. Pickard, Old Mill Road, Greenville
1921—Mrs. E. Paul duPont, Squirrel Run Hill, Montchanin
1933—Mrs. Donald P. Ross, Montchanin
L—Mrs. H. Fletcher Brown, 1010 Broome St., Wilmington
L—Mrs. C. Douglas Buck, Buena Vista, Wilmington
L—Mrs. W. K. duPont, Box 52, Wilmington
1934—Mrs. Leslie P. Mahoney, 2201 Gilpin Ave., Wilmington
L—Mrs. W. C. Spruance, 2507 W. 17th St., Wilmington
L—H. F. duPont, Winterthur

DISTRICT OF COLUMBIA

- C—B. Y. Morrison, Takoma Park, D. C.
1933—Mr. R. H. Burtner, 2223 Douglas St., Washington
C—Mrs. Theodore Irving Coe, 4000 Cathedral Ave., Washington
1921—Mr. Chas. E. F. Gersdorff, 1825 North Capitol St., Washington
C—Dr. David Griffiths, U. S. Department of Agriculture, Washington
1925—Bernard H. Lane, 5327 Conduit Road, Washington
1928—U. S. Department of Agriculture, Library, Washington
Mrs. T. H. B. McKnight, 1615 21st St., N. W., Washington
1931—Mr. J. E. Parker, 1217 Lawrence St., N. E., Washington
1928—Mrs. George W. H. Soellner, 3436 17th St., N. W., Washington
1934—Mrs. Thorne Strayer, 2837 29th St., N. W., Washington

FLORIDA

- L—Mrs. Claud Meeker, Nelmar and Magnolia Aves., St. Augustine

GEORGIA

- 1931—University of Georgia, General Library, Athens
1930—Mrs. James R. Bachman, 2646 Alston Drive, Atlanta
1934—Mrs. Fred F. Creswell, Route No. 6, Roswell Road, Atlanta
1933—Dr. L. C. Fischer, 35 Linden Ave., N. E., Atlanta
1930—Mrs. A. T. Harris, 1509 Ponce de Leon Ave., N. E., Atlanta
1931—Mrs. Arnold Hepp, 1110 Club Lane, Atlanta

- 1933—Miss May Hudson, 1474 Peachtree St., N. W., Atlanta
 1934—Iris Garden Club, Mrs. Bolling Sassnett, Pres., 1708 Peachtree St.,
 Atlanta
 1933—Mrs. Richard W. Johnston, 5 Wesley Road, W., Atlanta
 1934—Mrs. Robert Campbell, Route No. 2, Cave Spring
 1934—Mrs. George P. Estes, 60 Green Street, Gainsville
 1934—Mrs. E. F. Carlisle, 525 S. Hill St., Griffin
 1934—Mrs. Cooper Newton, 204 W. College St., Griffin
 1934—Mrs. J. C. Alexander, Jefferson
 1934—Mrs. D. P. Few, Madison
 1928—Mr. Sam L. Graham, Superior and City Courts, Rome
 1930—Mrs. John Lewis Kilgore, Route No. 1, Box 37-A, Stone Mountain

IDAHO

- 1932—Mr. Stanley C. Clarke, School of Forestry, University of Idaho,
 Moscow
 1930—J. H. Christ, Supt., Experiment Sta., University of Idaho, Sandpoint

ILLINOIS

- 1934—Mrs. H. L. Medbery, Armington
 1927—Mrs. George R. Charters, Ashton
 L—Miss Harriet F. Holmes, S. Batavia Road, Batavia
 C—Mrs. Azro Fellows, 321 N. State St., Belvidere
 1926—Mrs. Lelia M. Bach, 1111 E. Grove St., Bloomington
 1932—Mr. C. H. Baumgart, 2002 E. Jackson St., Bloomington
 1928—W. B. Otwell, Carlinville
 1928—Mrs. E. J. Townsend, 510 E. John Street, Champaign
 1934—Robert G. Buzzard, Eastern Ill. State Teachers College, Charleston
 1922—Mr. Sherman Duffy, *The Chicago American*, 326 W. Madison St.,
 Chicago
 1931—Mrs. A. L. Farwell, 1301 Ritchie Court, Chicago
 1931—Mr. David F. Hall, Amer. Telephone & Telegraph Co., 311 W.
 Washington St., Chicago
 1933—Mrs. Frank C. Lambert, 2445 Iowa St., Chicago
 1933—Mrs. Katherine K. Perrigo, 3931 N. Hamlin Ave., Chicago
 1934—Mr. Norman Schwennesen, 4243 N. Damen Ave., Chicago
 1927—Mrs. C. A. Shull, 5605 Drexel Ave., Chicago
 1925—Vaughans Seed Store, 601 W. Jackson Blvd., Chicago
 C—Mr. J. Roy West, 1101 Buena Ave., Chicago
 1933—Dr. A. C. Wilhelm, 3040 N. Mansfield Ave., Chicago
 1934—George G. Zink, 8163 Cornell Ave., Chicago
 1934—Miss Mildred E. Manuel, Rand Road, R. No. 2, Box 27-A, Des
 Plaines
 1933—Mrs. C. R. Walgren, Dixon
 1925—Mr. Josiah Whitnel, 505-11 First National Bank Bldg., East St.
 Louis
 1934—Dr. Franklin J. Cook, 2131 Orrington Ave., Evanston
 1928—Mrs. John R. Williams, 2423 Harrison St., Evanston
 1932—Mrs. Fred P. Vose, 1131 Ridge Ave., Evanston

1931—Garden Club of Evanston, 1512 Ashbury Ave., Evanston
 1923—Mrs. W. L. Karcher, 1011 W. Stephenson St., Freeport
 1924—Mrs. Douglas Pattison, 871 W. Stephenson St., Freeport
 1925—P. L. Battey, Prop., Northbrook Gardens, Glencoe
 1928—Mrs. Fred H. Clutton, 589 Kimball Road, Highland Park
 1934—Mrs. Roy A. Crossman, 712 Yale Lane, Highland Park
 1933—Mrs. Leroy F. Harza, 2299 Pierce Road, Highland Park
 1933—Mrs. O. W. Dynes, 318 N. Madison St., Hinsdale
 1928—Euclid Snow, R. F. D. No. 2, Clarendon Hills, Hinsdale
 L—Mrs. Walter S. Brewster, Covin Tree, Lake Forest
 1928—Inez Douglas, 910 N. Green Bay Road, Lake Forest
 Morton Arboretum, Lisle
 1925—Mr. Hubert A. Fischer, 332 S. Grace St., Lombard
 1931—Mrs. Thomas H. Slusser, 5835 East Circle Ave., Norwood Park
 1931—Ray J. Belsley, 2417 Seventh Ave., Peoria
 1922—Mr. M. H. Scott, Piper City
 C—Arthur Bryant & Son, Princeton
 1924—Edward Auten, Jr., Princeville, Peoria County
 1932—Richard Goodman, 253 Bloomingbank Road, Riverside
 1928—Mrs. Frank H. Landon, 180 Herrick Road, Riverside
 1921—G. J. Boehland, Coreys Bluff, Rockford
 1931—Mr. William R. Jack, 205 W. Pine St., Springfield
 1930—Mrs. Lindsay R. Hahn, 2617 S. 11th St., Springfield
 1933—Mrs. Louise Shepard Pittman, Streator
 1934—Mrs. E. F. Plumb, 321 Main St., Streator
 1933—Mr. M. F. Michels, 108 N. Sheridan Road, Waukegan
 1932—Mr. Horace G. Reed, Box 304, Waukegan
 1934—Mrs. Hans Herbert Gugler, 719 Naperville Road, Wheaton

INDIANA

1927—Alfred C. Kinsey, Indiana University, Bloomington
 C—Mr. Paul H. Cook, Bluffton
 1931—Miss Mary Williamson, The Longfield Iris Farms, Bluffton
 1921—Joseph R. Harrison, Columbia City
 1927—Mrs. Norman S. Horton, 1233 N. Main St., Elkhart
 1925—E. G. Lapham, 1003 Strong Ave., Elkhart
 1933—Mr. John C. Rheinhardt, 2006 Fifth Ave., Evansville
 1934—Mr. Earl E. Stevens, 2501 Oakridge Road, Ft. Wayne
 1931—J. M. E. Riedel, 542 E. State Blvd., Ft. Wayne
 1928—Miss Mary Rankin, 514 N. East St., Greensburg
 1931—Clyde M. Bower, 3305 W. Washington St., Indianapolis
 1925—Mr. Orville de Motte, 5526 N. Penn St., Indianapolis
 C—Margaret L. Griffith, 335 Burgess Ave., Indianapolis
 1920—Mrs. Charles J. Lynn, 5600 Sunset Lane, Indianapolis
 1931—A. W. R. MacKenzie, Route No. 13, Box 97, Indianapolis
 C—Mr. Lorenz G. Schumm, 302 C St., La Porte
 1927—G. A. Young, Purdue University, Lafayette
 1934—Mr. W. A. Aepli, International Black Minorca Club, Plymouth
 1931—Mrs. J. M. Richer, South Whitley

1933—Miles G. O'Neill, Washington

1934—Mrs. F. W. Sullivan, Jr., 1542 Amy Avenue, Whiting

IOWA

1931—Miss Hazel N. Chapman, Bagley

1928—Mrs. L. W. Butterfield, 2234 Upland Drive, Cedar Rapids

C—Miss Anna Karka, 1245 First Ave., S. E., Cedar Rapids

1934—Mr. Arthur E. Smith, 1737 18th St., Cedar Rapids

1934—Mr. Frank Svec, 1021 1st St., Cedar Rapids

1928—Mrs. Jessie F. Shambaugh, Clarinda

1934—Mrs. M. A. Tinley, 520 3rd St., Council Bluffs

1931—Roy B. Barquist, 716 19th St., Des Moines

C—Mrs. W. G. DuMont, 306 51st St., Des Moines

1931—Mr. Alfred C. Hottes, Meredith Publishing Company, Des Moines

1930—Carl Singmaster, Sunny Place Gardens, 1703 Tichenor St., Des Moines

1933—Mr. John T. Kahle, 1965 Alta Vista, Dubuque

1933—Mr. B. B. Brown, 2004 N. Main St., Hamburg

1934—Interstate Nurseries, Hamburg

1928—Rouze Hunter, Knoxville

1934—Mr. W. J. Brucher, Le Mars

1931—C. G. Whiting, Mapleton Trust & Savings Bank, Mapleton

1931—Miss Minnie Koeper, Route No. 4, Marshalltown

1930—Prof. W. H. Norton, Cornell College, Mt. Vernon

1934—Mr. D. W. Hall, 723 5th St., Perry

1932—Mrs. E. C. Currier, 2115 Summit Ave., Sioux City

1932—Mr. Edward Gallagher, 2301 E. 8th St., Sioux City

1934—Mrs. D. W. McAhren, 2916 Jones St., Sioux City

1933—Mrs. Ralph E. Ricker, 1516 Rose St., Sioux City

1927—W. S. Snyder, 3822 4th Ave., Sioux City

1934—B. N. Stephenson, 3600 6th Ave., Sioux City

KANSAS

1934—Mr. Josie Eresch, Beloit

1932—Mr. Melven G. Geiser, Fair Chance Farm, Beloit

1925—L. F. Valentine, Clay Center

1927—Mrs. H. W. Manning, 1420 Rural St., Emporia

1921—Walter Timmerman, 2017 Freeman Ave., Kansas City

1926—Howard M. Hill, Lafontaine

1934—Mrs. Frank E. Jones, 1140 E. 13th St., Lawrence

1926—Mrs. Walter V. Thomas, Bird Haven Iris Gardens, 722 S. Broadway, Leavenworth

1922—Mr. R. A. Seaton, Kansas State Agricultural College, Manhattan

C—Percy W. Smith, Route No. 2, Overland Park

1930—The Iris Garden, Miss Dorothy Stoner, Route No. 2, Overland Park

1934—Mrs. Lyndon F. Day, 1257 Garfield Ave., Topeka

1926—W. A. Harshberger, 1401 College Ave., Topeka

1925—Dr. C. F. Menninger, Route No. 4, Oakwood Peony Farm, Topeka

1931—A. H. Covert, 1351 S. Hydraulic Ave., Wichita

1932—Wichita Garden Club, Mrs. Edward R. Gruger, Secretary, 420 N. Pershing Ave., Wichita

1933—Mrs. C. L. Henderson, 338 N. Quentin Ave., Wichita

1933—Linwood Iris Garden, Blanche Covert, 1351 S. Hydraulic Ave., Wichita

KENTUCKY

1926—R. K. McClure, Jr., 319 Washington St., Frankfort

1923—Mrs. J. L. Dodge, Hollywood Farm, Lexington

1921—Mrs. Boyce W. Fontaine, Iron Works Road, Lexington

1925—Miss Daisy Hume, Winchester Road, Lexington

1926—Dr. John W. Scott, 328 N. Limestone, Lexington

1921—Mrs. Temple Bodley, 422 W. Oak St., Louisville

1926—W. R. Cobb, Route No. 1, Box 318, Louisville

1930—Frank M. Drake, 1017 Kentucky Home Life Bldg., Louisville

1928—Mrs. Clarence R. Gertner, Terrace Hill Gardens, 1525 S. Preston St., Louisville

1927—Dr. Henry Lee Grant, 810 Starks Bldg., Louisville

1933—Carl Carpenter, 221 E. 4th St., Owensboro

1934—Samuel H. Morton, 1405 W. 2nd St., Owensboro

1933—Mrs. A. R. Meyers, 228 N. 9th St., Paducah

LOUISIANA

1934—Mr. Edward A. McIlhenny, Avery Island

MAINE

C—Prof. Manton Copeland, 88 Federal St., Brunswick

L—Mr. Philip Meserve, 79 Federal St., Brunswick

1933—Leon F. Bryant, Cobb Road, Camden

L—Mr. Walter E. Tobie, 3 Deering St., Portland

1927—Miss Rita C. Smith, 163 Main St., Thomaston

MARYLAND

1930—Mr. G. R. Clements, 7 Thompson St., Annapolis

C—J. Marion Shull, 207 Raymond St., Chevy Chase

1932—Mr. Howard R. Watkins, 308 Cumberland Ave., Chevy Chase

1930—M. B. Doub, Hearthstone Farm, Route No. 4, Hagerstown

1933—Mr. J. C. Somers, 5515 Edna Ave., Hamilton P. O., Balto. County

1933—Mr. H. H. Harned, 34 Green St., Oakland

1930—M. B. Waite, R. F. D. No. 1, Odenton

1933—Mrs. W. H. Haydon, Riderwood, Baltimore County

1934—Mrs. Charles W. Ayers, 217 Maple Ave., Takoma Park

1930—Mrs. Frank Gould, Locust Vale, Towson

C—Mrs. John Love, Towson

1931—Mr. W. J. Puffer, 242 Bristol Road, Webster Groves

1927—Mrs. E. J. Reid, Welbourne

MASSACHUSETTS

1933—Mrs. H. A. Phinney, 83 Gray St., Arlington

1931—Mr. Eugene O. Parsons, 6 Leicester St., Auburn

1931—Harold W. Knowlton, 32 Hancock St., Auburndale

1931—Dr. G. Percy Brown, Barre

- 1924—Dr. Edgar Anderson, Arnold Arboretum, Jamaica Plain, Boston
 L—Mr. E. B. Dane, 6 Beacon St., Boston
- 1927—Mr. E. I. Farrington, Editor Horticulture, 300 Massachusetts Ave., Boston
 C—H. C. Goehl, 26 Myrtle St., Jamaica Plain, Boston
- 1926—Mrs. Edward W. Hutchins, 166 Beacon St., Boston
 C—Mr. Robert T. Jackson, 20 Lime St., Boston
- 1928—Robert T. Paine, 10 State St., Boston
 C—Miss Amelia Peabody, 120 Commonwealth Ave., Boston
 C—F. T. Pratt, 200 Devonshire St., Boston
- 1934—Dr. George R. Minot, 71 Sears Road, Brookline
- 1931—Olmsted Brothers, 99 Warren St., Brookline
 L—Dr. Harris Kennedy, Gray Herbarium, 79 Garden St., Cambridge
 L—Miss Mildred A. Miller, 148 Hancock St., Cambridge
 L—Mrs. Ernest B. Dane, Roughwood, Chestnut Hill
 C—Mrs. Clement S. Houghton, 152 Suffolk Road, Chestnut Hill
- 1925—Mrs. B. Preston Clark, 171 Marlborough St., Cohasset
- 1925—Mr. Charles Huntington Smith, Deerfield
- 1933—Miss Allie W. Omev, 13 Cherry St., Fairhaven
- 1928—Mrs. Thomas H. Blodgett, Great Pine Farm, Great Barrington
 L-C—Robert S. Sturtevant, Groton
- 1930—Park Department, City Hall, City of Haverhill, Haverhill
 L—Mrs. Herman E. Lewis, 180 Grove St., Haverhill
- 1921—Mr. Herman E. Lewis, 180 Grove St., Haverhill
 L—Dr. A. C. Bagg, 72 Fairfield Ave., Holyoke
- 1926—Mrs. W. A. Prentiss, 1399 Northampton St., Holyoke
 L—Stephen F. Hamblin, 45 Parker St., Lexington
- 1934—Mr. Charles D. Leonard, 753 Waltham St., Lexington
- 1927—Mrs. P. E. Raymond, 23 Revere St., Lexington
 L—Mrs. Thomas Nesmith, 166 Fairmount St., Lowell
- 1934—Mrs. Harry K. Gardiner, 26 Brookhouse Drive, Marblehead
- 1932—Mrs. Florence C. Murray, 31 Geneva Road, Melrose
- 1933—Asher P. Balcom, 57 Washington St., Natick
- 1926—L. Merton Gage, Sunnyside Gardens, Natick
- 1931—Mrs. Francis V. Crane, South St., Needham
- 1931—George H. Bliss, 96 Lime St., Newburyport
- 1933—Mrs. F. P. Lowry, 62 Walnut Park, Newton
- 1932—Mr. Arthur H. Fewkes, 120 Hyde St., Newton Highlands
 C—T. F. Donahue, 2352 Washington St., Newton Lower Falls
- 1928—Mrs. L. A. Frothingham, North Easton
- 1931—Mrs. William F. Baker, Vernon St., Norwood
- 1933—Mr. Robert Gow, 331 South St., Oxford
- 1934—Henry Jewett Greene, Petersham
- 1931—Mrs. Harry Webster Searles, 2 Holmes Terrace, Plymouth
 C—Mrs. Wm. E. Clark, Sunnymede, Sharon
- 1926—Rev. Edw. K. Thurlow, Christ Church, Sheffield
- 1931—Mr. Arthur Hadley, 46 Pearl St., Somerville
- 1928—Miss H. C. MacLaren, S. Egremont

1930—Robert C. Foster, 43 Kenwood Park, Springfield
 1928—Mrs. Gurdon W. Gordon, 90 Dartmouth St., Springfield
 C—William B. Kirkman, 275 Maple St., Springfield
 1926—Springfield Park Department, Springfield
 1934—Mrs. Bernard Hoffman, Brookside, Stockbridge
 1926—Mrs. Gertrude W. Phillips, 7 Sheridan Road, Swampscott
 1925—Mrs. Gertrude I. Titus, 17 Sheridan Road, Swampscott
 1923—Mr. Ralph C. Bean, 48 Emerson St., Wakefield
 L-C—Miss Grace Sturtevant, Wellesley Farms
 1933—Mr. Roland A. Parker, West Boylston
 L—Miss M. R. Case, Hillcrest Farm, Weston
 L—Mrs. Lindsley Loring, Westwood
 C—Mrs. Percy G. Browne, 301 S. Washington St., Whitman
 1933—Mrs. Bessie G. Conant, 696 Washington St., Whitman
 1921—Mrs. Robert C. Allen, 19 Metcalf St., Worcester
 1933—Miss Gladys A. Durkee, 27 Mountain St., W., Worcester
 L—Mrs. Homer Gage, 8 Chestnut St., Worcester
 1923—W. J. McKee, 48 Kenwood Ave., Worcester

MICHIGAN

1922—H. A. Fee, 411 S. Main St., Adrian
 1928—Mrs. Sam Burchfield, Huron Valley Iris Gardens, Ann Arbor
 C—A. E. Greene, 415 E. William St., Ann Arbor
 1934—Mr. Marley P. Williams, 1011 E. University Ave., Ann Arbor
 1931—Mrs. L. C. Thielk, 1435 Rosewood, Ann Arbor
 1924—Mr. R. V. Ashley, 172 Grand Blvd., Battle Creek
 1931—A. F. Bloese, 128 Roseneath, Battle Creek
 1934—W. F. Benning, Route No. 4, Benton Harbor
 1933—Miss Addie Sly, Sly Fruit Farm, Maple Road, Birmingham
 1934—Walter Riemenschneider, R. F. D. No. 1, Chelsea
 1921—Hugh Ledyard, 35 Cloverly Road, Grosse Pointe Farms
 1926—Charles U. Bear, 654 Putnam Ave., Detroit
 1933—Mr. J. C. Mulkey, 17664 Pierson Ave., Detroit
 1932—Mrs. Hoyt Nissley, 142 Puritan Ave., Detroit
 1934—Mrs. E. M. Olsen, 2016 Ash St., Detroit
 1922—Mrs. F. W. Robinson, 390 E. Grand Blvd., Detroit
 1927—James A. Smith, Jr., 150 Webb Ave., Detroit
 1928—Mrs. A. N. Larsen, Fennville
 1934—Mrs. L. D. Englerth, 4652 Division Ave., South, Grand Rapids
 1934—Mrs. B. H. Shepard, 418 E. King St., Lowell
 1922—Mr. Will M. McClelland, 419 N. Jefferson St., Saginaw

MINNESOTA

1926—Mrs. M. F. Bates, 317 E. 4th St., Duluth
 1931—Duluth Peony & Iris Society, Joseph M. Sellwood, Sec'y., Duluth
 1934—Mrs. J. J. Joyce, 2727 E. Fifth St., Duluth
 1934—Mrs. J. F. Thompson, 529 Woodland Ave., Duluth
 1931—A. S. Avery, Box 131, Hutchinson
 1934—Mrs. Charles K. Velie, Far View, Long Lake

- 1933—Mr. C. R. Brackett, 310 Foshay Tower, Minneapolis
 1928—L. W. Lindgren, 1787 W. Minnehaha St., St. Paul
 1931—Robert V. Schreiner, Schreiner's Iris Garden, Riverview Station,
 St. Paul
 1932—Mr. J. C. White, R. F. D. No. 1, Box 23, South Haven

MISSISSIPPI

- 1932—Mrs. H. M. Waddell, Clarksdale
 1934—Mr. M. F. Rubel, President, Boy Scouts Nursery, Corinth
 1933—Dr. W. A. Percy, Percy Strauss & Kellner, Greenville

MISSOURI

- 1931—Mrs. E. G. Johnson, 234 Lockling Ave., Brookfield
 1934—Mrs. Emilia D. Onsdorff, Bucklin
 1931—Mrs. O. K. Bovard, Conway & Ballas Roads, R. F. D. No. 3, Box
 554, Clayton
 1934—M. P. Burroughs, Route No. 2, Box 1017, Pike Road, Clayton
 1928—Mrs. I. A. Stevens, Clayton and Conway Roads, Clayton
 1934—Mr. Daniel E. Beebe, Hickman Mills
 1925—J. H. Grinter, 737 S. Main St., Independence
 1928—Mr. Joseph M. Branson, 4141 Terrace St., Kansas City
 1933—Mrs. J. F. Huckle, 3737 Gillham Road, Kansas City
 1928—George Graham, 620 N. Taylor Ave., Kirkwood
 1928—Bruce C. Maples, Maples' Gardens, Ozark
 1932—Mrs. Annie E. Howard, Republic
 1931—Mrs. W. W. Holliway, Holliway Lumber Company, Rockport
 1934—Mr. R. E. Borene, 40th and Doniphan Ave., St. Joseph
 1934—Mr. E. A. Byous, 817 Garden St., St. Joseph
 1933—Mrs. Ella W. Callis, Wild Rose Iris Gardens, Route 5, St. Joseph
 1934—Mrs. Frank H. Conner, 405 Highland Ave., St. Joseph
 1931—O. J. McBride, 2208 Angelique St., St. Joseph
 1932—Mr. Carl O. Schirmer, 6106 King Hill Ave., St. Joseph
 1926—F. J. Boehm, 315 N. 12th St., St. Louis
 Farr Memorial Library, Missouri Botanical Garden, St. Louis
 C—Mr. Henry J. Gerling, 3632 Lafayette Ave., St. Louis
 1932—Mrs. Richard G. Hager, 3443 Hawthorne Place, St. Louis
 1928—Paul A. Kohl, Missouri Botanical Garden, St. Louis
 C—Missouri Botanical Garden, 2315 Tower Grove Ave., St. Louis
 L—Dr. George T. Moore, Missouri Botanical Garden, 2315 Tower
 Grove Ave., St. Louis
 1932—Joseph F. Wiesner, 7475 Warner Ave., St. Louis

MONTANA

- 1934—Mr. C. C. Bever, 310 N. 29th St., Billings
 1930—Montana State College, Horticultural Department, Bozeman

NEBRASKA

- 1933—Mrs. J. M. Kilpatrick, 1100 Jackson St., Beatrice
 1927—J. B. Bratt, Bennet
 1933—Mrs. Harvey M. Hudson, Humboldt

- 1934—Miss Margerie Bernstein, 2433 Washington St., Lincoln
 1928—W. H. Dunman, Agricultural College, Lincoln
 1925—Harry H. Everett, M. D., 2433 Woodcrest, Lincoln
 1933—Mr. G. H. Graham, 4410 Judson St., Lincoln
 1934—Mrs. Charles Jordan, Route No. 10, Lincoln
 1934—J. H. Kitchen, Route No. 2, Box 94, Lincoln
 1932—Mrs. A. C. Nelson, 2056 S. 18th St., Lincoln
 1933—Mrs. C. B. Towle, 1800 E St., Lincoln
 1932—Adah Tucker, 730 S. 14th St., Lincoln
 1934—W. W. Yocum, 3218 Dudley St., Lincoln
 1934—Mrs. Gus Houfek, Malmo
 1927—Mrs. Mabel Wernimont, Fillmore Gardens, Oihowa
 1934—Mrs. Fred F. Grauseman, Box 62, Florence Station, Omaha
 1922—Howard T. R. Judson, Pittsburgh Plate Glass Co., 14th and Jones
 Sts., Omaha.
 1926—Mrs. A. D. Mallory, 5013 Cumins St., Omaha
 C—Mr. Jacob Sass, Maple Road Gardens, Route No. 7, Benson Station,
 Omaha
 L—Henry E. Sass, Maple Road Gardens, Route No. 7, Benson Station,
 Omaha
 1934—Mrs. E. A. Creighton, Red Cloud
 1934—Mr. Erle Smiley, Seward
 1933—Miss Marian Day, 631 Kansas St., Superior
 C—H. P. Sass, Midwest Gardens, Washington

NEVADA

- 1934—Garden Gate Club, Mrs. Paulina E. Westover, R. F. D. No. 1, Box
 209, Reno
 1933—Mrs. Ludovica D. Graham, 1079 Ralston St., Reno

NEW HAMPSHIRE

- 1928—Robert J. Graves, M. D., 5 South State St., Concord
 1931—Hamilton Smith Library, University of New Hampshire, Durham
 1930—Keene Normal School, Keene
 1934—Ira S. Littlefield, New London

NEW JERSEY

- 1931—Dr. J. S. Wolfe, 44 Watsessing Ave., Bloomfield
 1923—Dr. Nancy Jenison, R. F. D. No. 2, Bound Brook
 1933—Mr. Graham L. Schofield, Care Evening Press Co., Bridgeton
 1934—Dr. Arthur J. Casselman, N. W. Cor. N. 2nd and Penn Sts., Camden
 1921—Mrs. Elliott Averett, Dixiedale Farm, Chatham
 1923—Miss Mary J. Averett, Orchard Cottage, Chatham
 1930—S. Houston Baker, 3rd, Denman Road, Cranford
 C—Mrs. Edward Harding, Fanwood
 1922—Mrs. Stephen Van Hoesen, Fanwood
 L—Mrs. Thomas M. DebeVoise, Green Village
 1928—Arthur Herrington, 1 Fairview Road, Madison
 C—Mrs. E. P. McKinney, Sunny Lawn, Madison

C—Mrs. E. M. Sanford, 37 Green Ave., Madison
 1933—T. P. Adler, 96 Llewellyn Road, Montclair
 1921—Mr. Charles H. Caldwell, 55 Warren Place, Montclair
 L—Theodore F. Hussa, 32 Clinton St., Montclair
 1934—Mr. H. F. Hall, Lyndora Gardens, 416 Chester Ave., Moorestown
 C—Mr. Edmund W. Maule, 554 Chester Ave., Moorestown
 1934—J. C. Layer, Jr., Morris Plains
 1926—Edward H. Levis, Mt. Holly
 L—William S. Benson, 663 Main Ave., Passaic
 1930—Miss Harriette R. Halloway, 225 E. Seventh St., Plainfield
 1923—Mrs. Howard Huntington, 334 Franklin Place, Plainfield
 1925—Mrs. Chester B. Lawrence, 1000 Hillside Ave., Plainfield
 C—Mrs. Henry G. Wells, P. O. Box 86, Plainfield
 1927—Mrs. James Barnes, Princeton
 1927—Miss Natalie Antz, 177 Schley St., Newark
 1934—Essex County Park Commission, 115 Clinton Ave., Newark
 1933—Miss Elizabeth A. Case, 8 Union Place, Newton
 1931—Mrs. B. A. Stewart, 76 Ryerson Ave., Newton
 1927—Mrs. R. A. Harper, So. Paramus Road, Ridgewood
 1921—G. Derby White, 371 S. Irving St., Ridgewood
 1925—Mrs. Benjamin S. Mechling, 303 Bank Ave., Riverton
 1920—Mrs. Henry A. Caesar, Rumson Road, Seabright
 L—Mrs. Charles A. Stout, Short Hills
 C—Mrs. John A. Stewart, Jr., Short Hills
 1925—Mrs. David L. George, Pine Acre, Wyoming Ave., South Orange
 1928—Mr. O. F. Vought, Box 81, Succasunna
 C—Mrs. Herbert R. Johnson, Tenaflly
 1933—Mrs. John Kuser, Jr., Titusville
 1934—Mrs. Barbara E. Walther, 474 Upper Montclair
 1931—Mr. David A. Starr, 201 Pine St., Wenonah
 1928—Mr. W. Herbert Dole, 23 Overlook Ave., West Orange
 1928—M. E. Douglas, Rugby Place, Woodbury

NEW YORK

1928—Mrs. A. Gordon Cummins, Barneveld
 1931—Joseph E. Cearmak, 46 Pine St., Baldwin, L. I.
 1934—Mrs. Edwin W. Teale, 93 Park Ave., Baldwin, L. I.
 1926—Harry Esty Dounce, 211-26 Waverly Ave., Bayside, L. I.
 C—Charlotte Swezey, Northern Blvd. and 215th St., Bayside, L. I.
 1922—Mr. Robert Wayman, 3909 214th Place, Bayside, L. I.
 1927—Mrs. Samuel Verplanck, Roseneath, Beacon-on-Hudson
 1927—Mrs. E. Kellogg Trowbridge, Bedford Hills
 C—Mr. Earl S. Miller, 504 Conklin Ave., Binghampton
 1922—Mrs. B. A. Jackson, Lake View Ave., East, Bright Waters, L. I.
 1928—Mrs. Ralph W. Williams, Little Crows Nest, Bronxville
 Brooklyn Botanic Garden, 1000 Washington Ave., Brooklyn.
 C—Dr. C. Stuart Gager, Director, Brooklyn Botanic Garden, 1000
 Washington Ave., Brooklyn

- C—Miss Hilda Loines, 3 Pierrepont Place, Brooklyn
 1927—Miss Maud H. Purdy, 266 Lenox Road, Brooklyn
 1923—Dr. George M. Reed, Brooklyn Botanic Garden, Brooklyn
 1927—Mr. Charles K. Bassett, 278 Depew Ave., Buffalo
 1928—Harry H. Larkin, 160 Windsor Ave., Buffalo
 1921—Rev. J. Storer, 589 Parkside Ave., Buffalo
 1930—Harry F. Little, Camillus—Jesse Nicholls, Jr., Camillus
 1934—Dr. George L. Branch, 318 Main St., Catskill
 1925—Mrs. J. H. Burton, Cedarhurst, L. I.
 1928—Mrs. U. S. Grant, 3rd, Clinton
 1928—Mr. Edward W. Root, Hamilton College, Clinton
 1931—Mr. H. Naldrett, Box 58, Farmingdale
 1931—Miss A. Gussow, 126 Beach 14 St., Far Rockaway
 1932—Mr. Fred R. Whitney, Hudson Gardens, Germantown
 1934—Mr. E. G. Polin, R. F. D. No. 1, Glen
 L-C—T. A. Havemeyer, Brookville, Glen Head, L. I.
 1927—Mrs. John C. Baker, Box 65, Great Neck, L. I.
 1920—James C. Stevens, Greenville
 1933—Mrs. Clara E. Wright, 15 Wall St., Gouverneur
 1925—Mrs. Wm. C. Ferguson, 37 Atlantic Ave., Hempstead
 1934—John A. Conway, M. D., 206 Main St., Hornell
 L—Mrs. Albert G. Milbank, Huntington, L. I.
 1921—Dr. L. H. Bailey, Ithaca
 Dept. of Floriculture, Cornell University, Ithaca
 New York State College of Agriculture, Library, Ithaca
 1922—Col. J. C. Nicholls, 114 Overlook Road, Ithaca
 1926—Mrs. H. Ries, 401 Thurston Ave., Ithaca
 1926—Albert Hazen Wright, 113 E. Upland Road, Ithaca
 1934—Mrs. E. S. Colyer, 160-44 121st Ave., Jamaica
 1931—Mrs. C. F. Johnson, Jr., 335 Main St., Johnson City
 1933—Edgewood Iris Gardens, Mrs. Bess L. Shippy, 536 Willow St.,
 Lockport
 1934—Mrs. Montfort C. Holley, 401 Locust St., Lockport
 1927—E. N. S. Ringueberg, M. D., 13 and 15 Main St., Lockport
 1931—Howard R. Glutzbeck, 25 Raymond St., Lynbrook, L. I.
 1932—Mr. Oliver James Pease, 45 Prospect Ave., Lynbrook, L. I.
 L—Alfred J. Crane, Lock Box 888, Monroe
 C—Mr. Louis Schmidt, 401 Tecumseh Ave., Mount Vernon
 1934—Mrs. A. G. Bixler, 33 Overlook Circle, New Rochelle
 1930—F. D. Giles, 26 Davis Ave., New Rochelle
 C—Mrs. L. W. Hitchcock, 61 Seaview Ave., New Rochelle
 1923—Mrs. Charlotte C. Jones, 100 Broadview Ave., New Rochelle
 1922—Mrs. H. S. Loughran, 10 Hillcrest Ave., New Rochelle
 C—Mrs. James J. Montague, 204 Drake Ave., New Rochelle
 1921—Mrs. Maude E. Peckham, 216 Eastchester Road, New Rochelle
 1931—Mrs. Frank M. Wright, 12 Elm St., New Rochelle
 1931—Dr. Samuel D. Bell, 131 E. 74th St., New York
 L—Marston T. Bogert, Havemeyer Hall, Columbia University, New York

- L—Mrs. Willard C. Brinton, 36 West 59th St., New York
- 1932—John Borin, New York Botanical Garden, Bronx Park, New York
- Kenneth R. Boynton, New York Botanical Garden, Bronx Park,
New York
- L—J. R. Bruce, 68 William St., New York
- 1932—Mr. Frederick W. Cassebeer, 953 Madison Ave., New York
- 1933—Mrs. W. Bayard Cutting, 24 E. 72nd St., New York
- Mr. A. T. De La Mare, Editor, Florists Exchange, Box 100 Times
Square Sta., New York
- 1930—Mrs. Carl A. De Gersdorff, 3 E. 73rd St., New York
- Farr Memorial Library, Horticultural Society of N. Y., 598 Madi-
son Ave., New York
- Garden Club of America, Secretary, 598 Madison Ave., New York
- 1934—Miss Elizabeth R. Greenwood, 11 E. 68th St., New York
- Mr. John Hartling, New York Botanical Garden, Bronx Park,
New York
- 1930—Mr. William Haynes, 25 Spruce St., New York
- 1931—Dr. Marshall A. Howe, New York Botanical Garden, Bronx Park,
New York
- 1930—Mr. Virgil V. Johnson, Supt., The Andrew Freedman Home, 1125
Grand Concourse, New York
- C—C. Lewis, 44 Wall St., New York
- 1933—Mrs. C. MacCulloch Miller, 18 E. 48th St., New York
- 1931—Isabella Pendleton, Landscape Archt., 11-15 East 60th St., New
York
- L—John Scheepers, 522 Fifth Ave., New York
- 1933—Mr. Charles F. Steinway, Steinway & Sons, 109 W. 57th St., New
York
- Dr. A. B. Stout, New York Botanical Garden, Bronx Park, New
York
- C—Dr. Charles M. Williams, 210 East 68th St., New York
- 1933—The Crowell Publishing Company, Att: Mr. Andrew S. Wing, 250
Park Ave., New York
- 1933—David M. Wood, 2 Wall St., New York
- L—Richardson Wright, House and Garden, Graybar Bldg., New York
- 1933—Miss H. May Brown, 517 Cedar Ave., Niagara Falls
- 1933—F. L. Koethan, 540 College Ave., Niagara Falls
- 1934—Mr. Raymond R. Baker, 173 North Ave., Owego
- C—Mrs. Robert C. Hill, Niederhurst, Palisades, Rockland County
- 1930—Mrs. John M. Perry, Palisades, Rockland County
- C—Mrs. M. J. Fox, Foxden, Peekskill
- 1934—Mr. Stuart Wilder, 15 Storer Ave., Pelham
- Editor Home Acres, Great Oak Lane, Pleasantville
- 1932—Mrs. Ruth Bennett, P. O. Box 152, Portville
- 1934—Mrs. Willard Ide Pierce, 101 Bleeker St., Port Jefferson
- 1934—Mrs. H. A. Fortington, Lime Ridge, Poughquay, Dutchess County
- 1931—Wm. M. Howell, Box 77, Sonoh Road, Poughkeepsie
- 1933—Mrs. O. B. Rogers, 9413 218th St., Queens Village

- C—Charles E. S. Rasay, P. O. Box 835, Richfield Springs
 1928—Riverdale-on-Hudson Garden Club, Mrs. W. R. Williams, 4710
 Delafield Ave., Riverdale-on-Hudson
 1927—Mrs. C. H. Strater, Locust Ave., Rye
 1928—George D. Jopson, Saugerties
 1934—Mrs. James Baird, 34 Walworth Ave., Scarsdale
 1933—Mr. Kenneth D. Smith, Benedict Road, Dongan Hills, Staten Island
 L—Anson W. Peckham, The Lodge, Skylands Farm, Sterlington
 L—Mrs. Wheeler H. Peckham, The Lodge, Skylands Farm, Sterlington
 1934—Dr. D. H. Squires, 89 Getzville Road, Snyder
 1931—M. F. Stuntz, 101 Liberty Terrace, Snyder
 L—Mrs. Alfred McEwen, Craig Anel, Tarrytown
 1931—Mrs. Elizabeth H. S. Eddy, 27 First St., Troy
 1932—W. A. Budlong, P. O. Box 385, Utica
 1933—Mr. James F. Hubbell, Mayro Bldg., Utica
 1934—The Utica Garden Club, Mrs. F. M. Bremiller, Pres., 1917 Bradford
 Ave., Utica
 1927—Mrs. Robert Bacon, Westbury, L. I.
 1931—John M. C. Emory, Powell's Lane, Westbury, L. I.
 1933—Mr. W. J. Young, Quarters 329, West Point
 1930—Mrs. Robert C. Green, 165 S. Broadway, White Plains
 1925—Florence L. Barrows, 40 Greystone Park, Yonkers
 L—Dr. Crocker, Boyce Thompson Inst. for Plant Research, 1086 N.
 Broadway, Yonkers

NORTH CAROLINA

- 1934—Mrs. M. L. Church, 2209 Sherwood Ave., Charlotte
 1934—Miss Eugenia W. Lore, 109 W. Depot St., Concord
 1930—Dr. Frederic M. Hanes, Duke Hospital, Durham
 C—Mary C. Bissell, Box 257, Franklin
 1928—Miss Virginia Ragsdale, Jamestown
 1934—Mrs. Carl H. Boone, Norwood
 1930—Miss Cicely C. Browne, State College Station, Raleigh
 1931—Mrs. Frank Stevens, 345 Stratford Road, Winston-Salem

NORTH DAKOTA

- 1934—Rev. Ellis L. Jackson, 519 Fourth St., Bismarck
 1933—Miss Bertha Faust, Route No. 4, Valley City

OHIO

- 1931—Mr. K. W. Johnson, 1721 Hampton Road, Akron
 1934—Mrs. W. R. Hamilton, 1390 N. Hague Ave., Route 1, Camp Chase
 C—Mrs. Wm. H. Altamer, 1511 Groesbeck Road, College Hill, Cincinnati
 L—Dr. W. McL. Ayres, Box 79, R. R. 10, Station M, Cincinnati
 1931—Mrs. Stephen E. Cone, 194 E. McMillan St., Mt. Auburn, Cin-
 cinnatti
 1925—Mrs. Wm. M. Doughty, 628 Elm St., Cincinnati
 1931—Col. Nelson J. Edwards, 1219 First National Bank Bldg., Cin-
 cinnati

- C—Mrs. J. F. Enigholz, R. F. D. 10, Box 23 OF, Cincinnati
 L—Carl H. Krippendorf, 622 Sycamore St., Cincinnati
 C—Mr. Charles S. Phillips, 200 Provident Bank Bldg., S. E. Cor.
 7th and Vine Sts., Cincinnati
 1921—Mrs. Lewis R. Smith, 2215 Victory Parkway, Cincinnati
 C—Mr. John Dee Wareham, Rockwood Pottery, Cincinnati
 1921—Mrs. S. B. Waters, 2005 Edgecliff Point, Cincinnati
 1927—Mrs. Dennis Weiskopf, 3946 Brookline Ave., Cincinnati
 1934—Franklin McVicker, 603 Oneida Road, Chillicothe
 1934—Garden Center of Greater Cleveland, East Blvd. and Euclid Ave.,
 Cleveland
 1934—Mrs. K. F. Holden, 1614 Hazel St., Cleveland
 1921—Lewis R. Smith, R. R. 1, Collinsville
 1927—Mrs. J. H. Arbuckle, 1291 Sunbury Road, Columbus
 1925—Mr. E. H. Bretschneider, 1388 Bryden Road, Columbus
 1934—Columbus Iris Society, Garden Center, E. Broad St., Columbus
 1934—Mrs. W. J. Hamilton, 1082 Broadview Ave., Columbus
 1921—Mrs. R. C. Kyle, 1222 Lincoln Road, Columbus
 C—Mr. George R. Syfert, 1541 Franklin Park South, Columbus
 1925—Dr. A. E. Waller, 201 Stanbury Ave., Bexley, Columbus
 C—Mr. Karl H. Lorenz, 390 W. 1st St., Dayton
 1934—Roy W. Gottschalk, 201 Summit St., Marion
 1928—Louis H. Frechtling, M. D., Box 205, R. R. No. 5, Meadowcroft,
 Hamilton
 1925—R. P. Wenham, Painesville
 C—Mrs. G. B. Groesbeck, Perintown
 1934—Mr. Luther B. C. Webb, Beemont Farm, Perrysburg
 1927—Mrs. Oliver C. Clarke, Westwind, R. D. No. 7, Springfield
 1932—Mr. W. R. LeGron, LeGron Floral Co., 125 Amherst Drive, Toledo
 1933—Mr. F. W. Lindsley, 4322 Commonwealth Ave., Toledo
 C—Mr. Lee R. Bonnewitz, 666 S. Washington St., Van Wert
 1920—Mr. Charles F. Wassenberg, Van Wert
 1931—Harry R. O'Brien, Four O'clock Garden Nursery, Wilson Road,
 West, Worthington
 1925—Mr. James B. Bennett, 1106 First National Bldg., Youngstown

OKLAHOMA

- 1931—Mrs. Charles E. Decker, 508 Chautauqua Ave., Norman
 1933—Mrs. Guy Y. Williams, 468 Elm Ave., Norman
 1932—The Oklahoma State Iris Society, Mrs. B. W. Sprankle, Secretary,
 636 E. Park Pl., Oklahoma City
 1931—Iris Unit G. F. C., Cleta Stubblefield, Secretary, 612 N. E. 9th
 St., Oklahoma City
 1934—Miss Eleanor Hill, 1220 S. Boston, Tulsa
 1931—Mrs. Helen T. Roe, 1311 East 26th St., Tulsa

OREGON

- C—National Iris Gardens, Howard and Thurlow Weed, Beaverton
 1933—Grant E. Mitsch, Brownsville

1934—Mrs. A. I. C. Black, R. R. No. 2, Corvallis
 1927—Carl Starker, Florist, Jennings Lodge
 1933—Mrs. G. A. Krause, 229 High St., Klamath Falls
 1924—Mrs. L. E. Williams, 520 S. Peach St., Medford
 1925—Mrs. J. A. McKinnon, 806 Upper Drive, Portland
 1934—Mr. L. A. Bundy, Oregon Fairview Home, Salem
 1931—Oregon State Library, Miss Harriet Long, Librarian, Salem
 1933—Jan de Graaff, Sandy
 1930—R. M. Cooley, 810 N. Water St., Silverton
 1925—Dr. R. E. Kleinsorge, Silverton

PENNSYLVANIA

School of Horticulture, Ambler

L-C—Mrs. J. Edgar Hires, Ardmore
 1928—John R. Hogan, 117 Llanfair Road, Ardmore
 1933—Mr. Phillip Martsolf, 1036 Fifth St., Beaver
 1925—Mrs. Mary F. Smith, Box 21, Bethayres
 L—Mrs. Isaac La Boiteaux, Bryn Mawr
 Orin C. Groover, 29 S. 27th St., Camp Hill
 1931—Miss Mary L. Stewart, 755 Philadelphia Ave., Chambersburg
 1934—Miss Katherine Tatcher, Penarile Road, Cynwyd
 1921—Mrs. W. B. Mercer, Doylestown
 1933—Linden G. Owens, Elizabethtown
 1931—Mrs. John Barclay, 320 W. Pittsburg St., Greensburg
 C—Mrs. W. M. Jacobs, Box 910, Harrisburg
 C—Miss Anne R. Kelker, 15 S. Front St., Harrisburg
 1920—Dr. J. Horace McFarland, Box 687, Harrisburg
 L—Mrs. Haldeman O'Conner, 13 North Front St., Harrisburg
 1923—Mr. Ryland W. Greene, 161 Rose Lane, Haverford
 C—C. H. Hall, Ingomar
 1931—Mrs. H. A. Coleman, 717 Ferndale Ave., Johnstown
 1928—Mrs. Pierre S. duPont, Kennett Square
 Jacques Cattell, Science Press, Lancaster
 1927—Edward C. Trax, 15th and R. R. Sts., McKeesport
 1925—Fairman R. Furness, Upper Bank Farm, Media
 L—Mrs. Arthur H. Scott, Route No. 3, Media
 1933—Mrs. Medford Brown, Haywood Road, Merion
 1926—O. E. Watkins, 1129 Penna. Ave., Oakmont, Allegheny County
 1926—Mr. Wm. Atkiss, 1145 Herbert St., Frankford Station, Philadelphia
 1920—Anna Warren Ingersoll, 1815 Walnut St., Philadelphia
 1924—The Penna Horticultural Society, 1600 Arch St., Philadelphia
 1932—Mr. Thomas W. Sears, Top Floor, Girard Trust Bldg., S. Penn
 Square, Philadelphia
 L-C—John C. Wister, Wister Street and Clarkson Ave., Germantown,
 Philadelphia
 C—Mr. Daniel A. Atkinson, 132 Oakwood Ave., West View, Pittsburg
 L—Eleanor McC. Chalfant, 5028 Mosewood Place, Pittsburg
 1932—Mr. Wm. J. Peck, 220 Washington St., Pittston

- 1930—Mr. T. L. Pillow, 3203 Orleans St., N. S. Pittsburg
 1930—William H. Evans, Box No. 5, Plainsville
 C—Mr. Byron Barnes Horton, 416 S. Main St., Sheffield
 1921—Mrs. George V. Harper, Shippensburg
 C—Miss Jane F. Lane, R. D. 1, St. Thomas
 1930—Agricultural Library, Penna. State College, State College
 L—Mrs. C. S. Ristine, Strafford
 1932—John Dolman, Jr., 304 Vassar Ave., Swarthmore
 1927—F. R. Strayer, Box 22, West Chester
 1931—Edmund G. Linton, Worthington, Armstrong County

RHODE ISLAND

- 1926—Allen W. Chatterton, 26 Kossuth St., Pawtucket
 1926—Ralph E. Kenyon, Box 655, Pawtucket
 1926—Miss Leila P. Bowen, 194 Waterman St., Providence
 1931—Anna L. Evans, 145 Medway St., Providence
 1921—Prof. John E. Hill, 86 Taber Ave., Providence
 1931—Mrs. James H. McCallion, Beaufort Gardens, 30 Beaufort St.,
 Providence

SOUTH CAROLINA

- 1933—Mrs. Sheffield Phelps, Rose Hill, Aiken
 1926—Mrs. H. L. McColl, 105 Jennings St., Bennettsville
 1933—Mrs. Arthur Baskin, 23 Ridge St., Bishopville
 1931—Wm. Elliott, 909-913 National Loan & Exchange Bank Bldg.,
 Columbia

TENNESSEE

- 1931—Clint McDade, Rivermont Drive, Chattanooga
 1934—Mrs. E. F. Jones, Gallatin
 1934—Mrs. James F. Leahy, Ball Camp Pike, Route No. 7, Knoxville
 1931—Mrs. W. C. Ross, 4155 Lyons View Pike, Knoxville
 1931—Hubert F. Fisher, 640 Anderson St., Memphis
 1931—Mrs. Morgan Ketchum, 178 S. McLean Blvd., Memphis
 1934—Mr. Geddes Douglas, 2700 Belair Ave., Nashville
 1933—Mrs. Rufus E. Fort, Fortland, Nashville
 C—Dr. L. C. Glenn, 2110 Garland Ave., Nashville
 C—Dr. J. H. Kirkland, Vanderbilt University, Nashville
 1931—Mrs. Edward C. Stahlman, 1501 21st Ave., South, Nashville
 1923—Mr. I. A. Washington, 1700 18th Ave., South, Nashville
 1932—Thomas A. Williams, Printing Crafts Bldg., 417 Commerce St.,
 Nashville

TEXAS

- 1931—Mrs. H. B. Armstrong, 2628 Wichita St., Austin
 1931—Mrs. James R. Hamilton, 2405 Nueces St., Austin
 1932—Mr. Frederick McAllister, Dept. of Botany and Bacteriology, Uni-
 versity of Texas, Austin
 1932—Mr. S. H. Yarnell, Division of Horticulture, Texas Horticultural
 Exp. Sta., College Station

1926—Mrs. Wm. H. Benners, 236 N. Lancaster Ave., Dallas
 1930—Mrs. M. F. Kirk, 3805 Stratford Ave., Dallas
 1926—Mrs. Gross R. Scruggs, 3715 Turtle Creek Blvd., Dallas
 1931—Holly B. Hampton, 4501 Dallas Pike, Forth Worth
 1934—Mrs. C. D. Reimers, 425 S. Hudson St., Fort Worth
 1934—Mrs. Allen B. Hannay, 2007 River Oaks Blvd., Houston
 1933—Mrs. W. H. Bledsoe, 1812 Broadway, Lubbock
 1931—George M. Allen, 1915 W. Magnolia Ave., San Antonio
 1933—Mr. J. H. French, 118 Green Lawn Drive, San Antonio
 1934—Mrs. Vlasta Frels, Yorktown

UTAH

1933—Mrs. Maud Chegvidden, 4137 S. Ninth St., East, Salt Lake City
 1927—Mr. Herman F. Thorup, 1195 Crystal Ave., Salt Lake City

VERMONT

1928—Mary E. G. Freeborn, Proctor
 1928—Henry T. Coe, Putney, Windham County
 1927—Miss Miriam E. Marsh, 40 Park St., Springfield
 1927—Annie D. Hazen, Box 472, White River Junction

VIRGINIA

1928—Mrs. Philip P. Campbell, Arlington
 1933—C. W. Culpepper, Route No. 1, Ballston
 C—Mr. H. P. Simpson, Glebe Road, Livingston Heights, Cherrydale
 1934—Miss Sadie B. Earheart, The Flower Patch, Christiansburg
 1925—Miss Florence Thompson, Lincoln Ave., East Falls Church
 1933—Mr. Benjamin G. Fernald, Hilton Village
 C—Mr. Thomas M. Fendall, Leesburg
 1923—Josephine P. Kinnier, 518 Washington St., Lynchburg
 1932—Mrs. R. L. Nicholson, Ingleside Ave., McLean
 1934—Miss Elizabeth Ivy, Hampton Roads Garden Club, Newport News
 1928—Mrs. John W. Friend, 28 N. Union St., Petersburg
 1926—Mrs. H. B. Frischkorn, 3500 Chamberlayne Ave., Richmond
 1925—Mrs. George A. Tower, 6213 Three Chopt Road, Richmond
 1931—Mr. J. P. Fishburn, P. O. Box 2531, Roanoke
 1930—Mrs. William Wayt Gibbs, Gibbs Hill, Staunton
 1926—Mrs. John R. Fisher, Williamsburg
 1920—Mrs. Joseph Walker, Woodberry Forest

WASHINGTON

1933—Julius Dornblut, Jr., 3100 Niagara St., Bellingham
 1931—Mrs. N. N. Nelson, 8th and Libby Sts., Clarkston
 1933—Mrs. J. J. Miller, Miller's Gardens, Grandview
 1923—Seattle Public Library, Seattle
 1931—Mr. Harry L. Stinton, Route No. 9, Box 822, Seattle
 1925—F. A. Thole, Thole's Gardens, 2754 45th Ave., S. W., Seattle
 1930—Frank H. Ludwigs, 111 W. Main St., Walla Walla
 1934—Garden Club of Wapato, Mrs. C. A. Jones, Wapato

WEST VIRGINIA

- 1925—Dr. Ford B. Rogers, Peacock Park, Fairmont
1933—Huntington Garden Club, Mrs. Grady Risen, Cor. Sec'y., 319 14th St., Huntington
1931—Dr. H. E. Knowlton, Dept. of Horticulture, West Virginia University, Morgantown
1931—Mrs. H. A. Barbee, Point Pleasant

WISCONSIN

- 1931—Mrs. P. B. Haber, 47 Woodland Ave., Fond du Lac
1928—Leo J. Engleberg, 142 S. 6th St., La Crosse
1932—Dr. Paul R. Hahn, 2028 Grange Ave., Racine
1932—Mrs. Louis Le Mieux, 2004 Ludington Ave., Wauwatosa

FOREIGN

AFRICA

- 1923—Mrs. Frank Joyce, Kilima Kui, Ulu Kenya Colony, East Africa

AUSTRALIA

- 1928—A. M. Harrison, 4 Hurlestone St., Prahran, S. I., Melbourne
1926—Mr. L. W. Wheeler, Eden Hill, South Australia
1934—Mrs. Mary L. Wheeler, Woodlands, Blackburn Road, Blackburn, Victoria, Australia

BELGIUM

- 1927—Joseph Aerts, 41 Rue Horace, Anderlecht
Melchoir, Fr., 33 Bd. Goffens, Hasselt

CANADA

- 1934—Mr. J. J. F. Winslow, Winslow & McNair, Barristers & Solicitors, Fredericton, N. B.
William Miles, Surreyhurst Farm, Ingersoll, Ontario
Mr. C. E. German, 521 Colborne St., London, Ontario
C—Mr. Edgar Jeffery, 65 Orchard St., London, Ontario
Mr. Alexander M. Ross, 113 Brisbin St., London, Ontario
C—Mr. William E. Saunders, 240 Central Ave., London, Ontario
Mrs. R. Percy Adams, 732 Upper Lansdowne Ave., Westmont, Montreal
L-C—F. Cleveland Morgan, Care Henry Morgan & Co., Ltd., Colonial House, Montreal
1931—W. R. Leslie, Supt., Experiment Station, Morden, Manitoba
Mr. A. R. Ibbotson, Supt., Box 172, Souris, Manitoba
1925—Miss L. A. Waddell, Perth, Ontario
Dr. C. T. Hilton, P. O. Box 26, Port Alberni, B. C.
1930—Mr. R. Eric Fisher, R. R. No. 1, Bolton Centre, Quebec
1927—Macdonald College, Horticultural Dept., Macdonald College P. O., Quebec
L—Harry A. Norton, Ayres Cliff, Quebec

- 1921—Miss M. E. Blacklock, Rowancroft Gardens, Meadowvale, Ontario
 Mrs. Lewis J. M. Grant, 159 Laclie St., Orillia, Ontario
- 1925—W. T. Macoun, Dominion Agriculturist, Central Exp. Farm, Ottawa, Ontario
- 1931—Scarboro Gardens Co., Ltd., Scarboro, Ontario
- 1930—H. H. Groff, Simcoe, Ontario
- 1931—Mr. F. L. Green, Greenwood, Ontario
- 1928—Charles Bauckham, 372 Bay St., Toronto 2
- 1931—A. H. Harkness, Room 620, 57 Bloor St., W. Toronto
- 1934—Miss Ann Laidlow, 32 North Shelbourne St., Toronto
 S. M. Scream, Suite 4, No. 1 Oriole Road, Toronto
 Mrs. Biggerstaff Wilson, 1770 Rockland Ave., Victoria, B. C.
 Mrs. D. Williamson, 525 Mount Pleasant Ave., Westmount, P. Q.
- C—Mr. L. T. Chadwick, 1100 Paris Bldg., Winnipeg, Manitoba
 Mr. G. S. Holmes, 187 Cordova St., Winnipeg, Manitoba
 Mr. H. Montrieff, 1191 Wellington Crescent, Winnipeg, Manitoba

ENGLAND

- 1928—F. Wynn Hellings, Fleur-De-Lis, 41, Grove Way, Esher, Surrey
 H—George Yeld, Orleton Wood Common, Gerrards Cross, Bucks
- 1921—Major G. Churcher, T. D., Beckworth Linfield, Hayward Heath, Sussex
 C—Geoffrey L. Pilkington, Lower Lee Woolton, Liverpool
 L—Lady Collet, St. Clere, Kemsing, Kent
- 1926—F. J. Chittenden, Tech. Adviser, Royal Horticultural Society, Vincent Square, London, S. W.
 Herbert Cowley, Editor, Bouverie House, Gardening Illustrated, London
- 1931—Royal Horticultural Society, Vincent Square, Westminster, London, S. W. 1
- 1930—Miss M. Gardner, Spencer, Maidenhead, Berks
- 1934—Mr. W. R. Cranfield, East Lodge, Enfield Chase, Middlesex
- 1931—Mr. B. R. Long, Hill Crest, Moorside, Oldham Lanes
- 1921—The Orpington Nurseries, Ltd., Orpington, Kent
- 1931—Mr. R. E. S. Spender, Halshanger, Bagley Wood, Oxford
- 1926—C. W. Christie-Miller, Swyncombe House, Oxon
 H—W. J. Carparne, Saints Bay, Guernsey, Channel Islands
- 1926—H. Chadburn, Middleton, Saxmundham, Suffolk
 L—Miss Sophia B. Steel, Anglefield, South Godstone, Surrey
- 1931—Miss L. Pesel, The White House, Colebrook St., Winchester
 Mr. F. C. Brown, Royal Horticultural Gardens, Wisley, Ripley, Surrey
- 1934—Mr. Angus Wilson, Tidcombe Manor, Nr. Marlborough, Wiltshire
- 1926—George Dillistone, Editor, The Iris Society, 43 Claremont Rd., Tunbridge Wells
 H—R. W. Wallace, Tunbridge Wells
- 1931—John Waterer Sons & Crisp, Ltd., The Floral Mile, Twyford Berks

FRANCE

H—Lionel Millet, Amilly, Loiret

1923—Cayeux-Le Clerc and Cie, 8 Quai de la Megisserie, Paris

Mr. Ferdinand Cayeux, 8 Quai de Megisserie, Paris

Editor Revue Horticole, 26 Rue Jacob, Paris

Le Bibliothecaire en Chef, Museum National D'Histoire Naturelle,
Rue de Buffon NB, Paris

M. Nombrot, Sec'y-Gen. Societe Nationale, D'Horticulture de France,
84 Rue de Grenelle, Paris

H—M. F. Denis, Villa Les Armandiers, Tamaris sur Mer, Var

GERMANY

Editor Gartenschonheit, Verlag der Gartenschonheit, Berlin

Camillo Schneider, Neu Ansbrucherstr. 12, Berlin W. 50

1925—Alexander Steffen, Pillnitz, Dresden

Kurt-Heimart-Holscher, Kaiserallee 29, Travemunde

HOLLAND

H—E. H. Krelage, Stoeburgstr. G, Haarlem

ITALY

Marchesa Iris Origo, La Foa, Chianciano, (Siena)

1926—Contessa Guilo Senni, Grottaferrata, Roma

