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THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
Published Monthly by Madison Cooper, Calcium, New York.

Vol. IV.

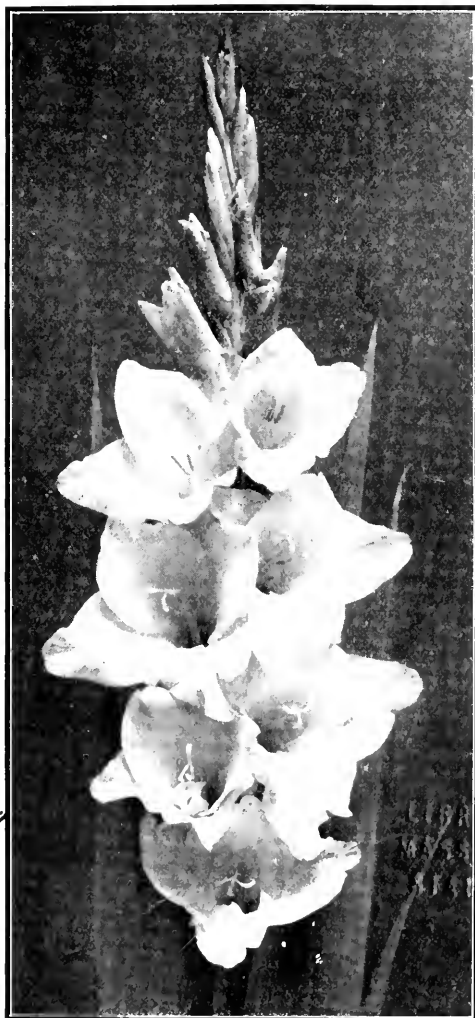
JANUARY, 1917

No. 1

GLADIOLUS— *MYRTLE.*

Awarded Silver Medal by the Massachusetts Horticultural Society in 1912. First Class Certificate of Merit, 1915, at show of Newport Horticultural Society and Garden Club of Newport, R. I. Has won many prizes and been awarded special mention in many different places.

With blooms grown from $\frac{3}{4}$ in-bulbs, H. E. Meader won second in pink class at Boston in 1916 and against strong competition.



DESCRIPTION.

This variety was originated by A. E. Kundera and is one of his plain petaled types. The flowers are of good size and graceful form and from four to six are open at one time. It is an early bloomer and excellent for forcing.

The color is a delicate rose pink, described as the most beautiful pink yet produced in a Gladiolus. The throat is marked with creamy white and with sometimes a small patch of pale primrose yellow on the inferior petals.

Classifying Exhibitors at Flower Shows.

A Symposium on the Subject Contributed to by a Number of Experienced Growers.

THE following ideas on the subject of classifying the exhibitors at flower shows, have, with the exception of the one by H. F. Clark, appeared in the publications to which due credit is given. We are pleased to print all shades of opinion on this subject and do not wish to confine the discussion to our own editorial ideas on what is correct. What we think about it is explained in our editorial columns this month. It would seem that we are getting nearer to a solution of the matter and we invite careful consideration of the arguments here set forth:

Classifying an amateur, I should say that he or she is (1) a person who grows flowers, fruit, etc., without the help of a gardener, for his own personal use and pleasure; (2) one who employs a gardener to grow for exhibition and home pleasure only; (3) one who employs a gardener and grows in quantity, sending the surplus to market. Any person growing in large quantities any one class of plants for market cannot correctly be classed as an amateur, and should not be so called. (SAMUEL SCOTT in *Florist's Exchange*.)

I want to enter my protest against the practice or ruling that some societies have made to divide the exhibitors into two classes, namely: *Commercial and Non-commercial*. The non-commercial to include not only regular amateurs, but also gardeners. It is the including of paid gardeners with amateurs that I object to for the reason that these gardeners are usually employees of wealthy people who not only have large and extensive gardens, but unlimited means with which to purchase new varieties, employ expert gardeners, etc. If there is any one class that is strictly professional, I believe that the so-called gardener, who is paid for his services, is that one. Certainly an amateur has no chance whatever competing with this class. I believe that this class of exhibitors, whether the exhibit is made in the name of the owner or the gardener, should be classed with the professionals, or what may be better, especially in large exhibitions, placed in a class by themselves.

H. F. CLARK.

This is a question that is being agitated just now and is deserving of the most careful consideration.

The field covered by the amateur is the growing of an article exclusively for one's own use and not for a remunerative purpose. The amateur may be of two or three classes; viz., a person who plants and cares for a crop with his own hands, or as, for example, John Brown may own a large estate and elect to grow vegetables, flowers, or fruit for his own consumption only. In order to accomplish this he engages Chas. Taylor as a gardener, and perhaps several assistants. John Brown wishes to exhibit flowers at the flower show in his name. He is an amateur, tech-

nically, in every sense of the word. Or John Brown prefers to have his gardener, Charles Taylor, exhibit them under the name of Charles Taylor, gardener for John Brown. In this case Chas. Taylor is an amateur in the same sense as his employer.

In my opinion there can be only one dividing line and that is this: A person who sells, or offers for sale any of his product becomes a commercial grower and should exhibit in no other class.

But in fairness to all amateurs, men who are employed by another person, and the person who employs them, should exhibit in a distinct class, as "Gardeners or Owners."

Then the persons just starting all stand on their own merits. In this way a new beginner will have an incentive to exhibit his goods and not be outclassed by the gardener who has experience and unlimited means at his disposal.

Again, to make it positively plain, any person who sells any of his product becomes a commercial grower and must be so regarded in an exhibition. (GEO. L. STILLMAN in *Florist's Exchange*.)

This is a hardy perennial. Every horticultural society, the smallest as well as the largest, has had experience of discussing the pros and cons of the question.

It is one of the problems lying immediately before the members of the American Dahlia Society, and as it is of general interest we introduce it here, and would be glad of opinions thereon.

The majority of people make two chief groups, the commercial and the amateur. Many again divide the latter, classifying professional gardeners and their employers as one section, and those amateurs who do all their own work as a separate section. This is surely the fairest classification.

In the literal sense of the word "amateur," every one who loves flowers has a right to that designation. "Amateur" simply means lover, and using the word in that sense many societies allow garden owners who have highly skilled professional gardeners, or numerous gardeners, to exhibit as amateurs. The small man who has no assistants, or only such assistants as help him to dig his land or wheel manure, has to compete with those who have unlimited means and ample help at their disposal.

Furthermore, some societies do not disqualify an amateur if he sells what he regards simply as surplus; or maybe he sells a novelty that he has raised. How illogical this latter definition is has been well exemplified over and over again in the case of professional and business men who have gardens and sell their surplus. It is perfectly well known that some of these have actually made a business of raising and selling Roses, Daffodils, Sweet Peas and other favorite flowers, and while not issuing any catalogs or lists, they have, nevertheless, exacted the highest sum possible for their seedlings or selections. Such men are traders pure and simple, masquerading as amateurs.

What is wanted is a classification that cuts clean. If a man is not in business he should be generous enough to give away his surplus; otherwise he becomes a trader and must compete with traders. A professional gardener, exhibiting on behalf of his employer, and using his employer's resources, ought to compete with men of like standing, namely, in the professional gardeners' class. In some cases professional gardeners make

a hobby of a given flower, and care for it largely or chiefly in their own time and by dint of their own means furnish the necessities for the production of the finest blooms or produce as the case may be. These men virtually are amateurs.

Thirdly, there ought to be a class for amateurs who do not employ *any* skilled help. An objection in the latter case has been raised as to the definition of what is skilled help, so that it would almost seem as though the small amateur would have to be one who does every operation in connection with the cultivation of his flowers solely by himself. This whole question is one well worth discussion.—*Editorial in Florists' Exchange.*

One of the chief disturbing questions of the moment is not the rise in the cost of living, how to get coal at \$8 a ton, nor how long Villa will remain at large; no, it is, what is an amateur gardener? Men have grown heated and red in the face arguing it. The long and short of it is that everybody but the man who grows for sale, is an amateur. At the shows the professional gardener who draws a salary of \$150 a month, which is a lot more than many a "commercial" man earns, is still an amateur, or rather he comes under the protective covering of his employer, who exhibits as an amateur. The small man or woman (and there are plenty of ladies in the ranks of amateur gardeners) who does all the work of the garden, from the planting up to the final cutting of the show bloom, may still hire an "odd" man to do the wheeling in of manure and the digging, so what is the difference between such a one and the man or woman higher up who gets a little more help—the little more in this case running all the way to staking and tying and pinching and syring with some et cetera thrown in? There's the rub. The wealthy owner of a large estate with a score of trained gardeners headed by a proficient superintendent at \$3,000, a house, and a helping hand to everything on the place, may still be an ardent and perfectly legitimate amateur. For the meaning of the word is lover, in this case, a lover of flowers, plants, trees, gardens.

Is not Mrs. Francis King an amateur? Is not Mr. Hunnewell an amateur; or Admiral and Mrs. Aaron Ward? Many others could be mentioned. The fad in the definition of amateur is simple and direct—one who grows his plants for pleasure and does not sell for a living. That he may occasionally sell surplus stock should not debar him or her from the title of amateur. Here, however, a difficulty arises, as when this ruling is given it would allow a doctor, a clergyman, a newspaper editor or any one of a different calling, but who cared for plants and grew a surplus to sell these—how often? Well, as often as he had a surplus! In England, where there is an enormous body of experienced and intelligent amateurs, many of them ought rightly to be classed as traders, i. e., commercial florists. Take the case of a celebrated clergyman who raised so many beautiful Narcissi. He was decidedly a trader, as he sold his novelties yearly at high prices. Another minister of the Gospel ministered to the people by breeding beautiful roses (which he sold for a consideration, not always trifling). A third "amateur" bought choice orchids, bred them with others equally select, raised seedlings, flowered them, and when they were proved and the thoroughbreds selected, he would have a big auction sale in London.

The worst kind of "amateur" is the one who tries to keep within the folds of the amateurs, yet who persistently sells. Sometimes it is actual surplus, often it is a surplus that has been patiently and patently planned for. These people want to make their garden pay some of its expenses. I once worked in a garden where everything was sold that would bring a cent, from rhubarb to roses. Yet at the shows Mr. H— was an amateur right enough, and a respected member of the council of the horticultural society, who

was backed by friends "in the trade" the latter had public nurseries and seed stores and couldn't very well pose as other than what they were. "Heigh ho," said Anthony Rowley.

So far I'm an amateur. I'll tell you the reason: I'm too poor to employ even a wheelbarrow man. (Between ourselves, a boy with down on his chin isn't bad help if he's willing.) But this very day I have lifted quite a quantity of English ivy shoots that had grown long and rooted, and these I've laid in trenches for the winter. Anybody want to buy a stock next May? Same with golden privet, which friend Manda gets a quarter and fifty cents for a piece. Yes, where is the line to be drawn? In flower show schedules there might be three classes provided for: 1, commercial growers; 2, amateurs who employ professional gardeners; 3, amateurs who do *all* their own work. The latter are termed "cottagers" in the Old Country; while in most schedules those in class 2 are termed "private growers."—*THE ONLOOKER in Gardener's Chronicle.*

Your editorial under this title, in the issue of Nov. 25, invites opinions on the subject, and as it seems that the writer was the cause of starting the discussion, it may not be out of place for him to express himself somewhat fully.

Let us, for the purpose of discussing the matter intelligently, consider the reason why it is necessary to define the amateur. It is, in this case, for the purpose of classifying exhibitors at flower shows. The amateur must be encouraged. He must not be loaded with restrictions so that he cannot exhibit. Commercial growers or professionals depend on the enthusiastic amateur to boom their business, therefore, every encouragement should be given the amateur to exhibit at the shows.

Wherever rules have been made restricting amateurs closely, it has resulted in reducing the number of exhibitors in the amateur classes practically to extinction. This is not the result desired. Of course we might go on discussing all the little possibilities and details and tell all the little stories as to how this one, that one and the other one exhibited in the amateur class when he was really a professional, and so on, but this does not get us anywhere except into deep water, from which a clear view of the situation cannot be had.

Exhibitors at flower shows should be classified as follows:

First, professional or commercial growers; those who engage in the business to make a profit out of it; who issue printed matter, advertise their stock, etc.

Second, private gardeners and advanced amateurs employing professional assistants. (This class would clearly be among growers who have sufficient means to employ skilled help and purchase rare and expensive varieties as desired.)

Third, advanced amateurs, composed of growers who are their own gardeners, employing no skilled help, but who employ common or unskilled labor.

Fourth, small amateurs, those who not only do their own gardening but also all the work in connection therewith, employing no help of any kind whatever.

The last class would be so small in number, in the opinion of the writer, that they would make no considerable showing at flower shows. Few growers indeed, are there who do not employ a man to plow their garden, haul manure and perhaps cultivate and dig their stock at harvest time. It would seem, therefore, that the fourth class would have so few entries that it would not be worth while to consider them.

A better way than to separate classes three and four doubtless would be to have classes of say three or five and ten or fifteen blooms, not allowing those amateurs who compete with the larger number of blooms to compete in the classes for the smaller number. This would automatically separate the two classes of amateurs.

The private gardener class, consisting of amateurs who employ skilled help, are plainly professionals because they employ professional labor and this class might be combined with class one for this reason.

It seems that at this time few are disposed to criticize the amateur for selling his product when opportunity offers, providing he does so in a non-professional way, incidentally, and not through advertising, printed matter, etc.

The dividing line between the amateur and the professional is necessarily not a clear one, as many of our representative professionals started originally as amateurs, and naturally there was no exact time in their experience when they changed from amateur to professional. The suggestion, therefore, that the dividing line should be in the use of printed matter and in the advertising of stock seems correct. Clearly, anyone who does this, is a professional, and conversely, those who do not use printed matter and advertise are, at least on the face of it, amateurs. When the amateur is far enough advanced to engage in the business as a business, surely he would employ printed stationery, advertise in the trade papers and issue a catalog. That there may be exceptions and abuses in connection with a matter of this kind there is no doubt, but let us be reasonable and not technical. It is surely poor encouragement to the enthusiastic amateur to disqualify him in a class in which he is reasonably entitled to compete, on a technicality that he sells some of his surplus stock.

Summarizing, we may say that professionals, or commercial growers, are clearly those who engage in the business for a livelihood, who advertise their stock and who are in the business for profit; amateurs are those who engage in growing for a love of the work primarily; if the latter sell, it does not affect their amateur status, providing they do so incidentally and do not advertise their stock for sale and use printed matter.

With the amount of discussion which has taken place on this subject during the past two years, it would seem that any exhibition committee could formulate a set of rules which should be satisfactory to the great majority of exhibitors and not do an injustice to any of them. It is not necessary to make rules so rigid that the exhibitor who is really dishonest and unfair cannot evade them. Such an exhibitor can safely be ignored. He will eliminate himself in a very short time. The successful exhibitor at flower shows must be a good sportsman, and good sportsmanship means above everything else fair play. Exhibitors may be allowed to choose their own class in 99 cases out of 100, and certainly the hundredth man can safely be forgotten.—MADISON COOPER in *Florists' Exchange*.

What Kind of Soil for Dahlias.

A question often asked, not only by amateurs but by professionals as well, is what kind of soil is required to grow Dahlias? We would answer, we do not know of any decent kind of soil that will not grow exhibition flowers, although undoubtedly the best soil is a deep loam with good drainage, one that, while it will retain a good portion of the rain that falls will not hold the water to the extent of drowning the plants.

The soil should have a good depth so as to allow the roots to penetrate deep enough to reach the moist, cool earth. It must be borne in mind that Dahlias are supposed to make their growth during hottest part of Summer. It is necessary

that the soil should be in a good state of cultivation, as Dahlias grow luxuriantly and are necessarily heavy feeders. If the ground is over-rich it has a tendency to cause too much growth of foliage. We rather prefer having it in good condition than trying to enrich it at the time the crop is planted or during the growing period.

We should advise that the ground on which Dahlias are to be grown the next Summer be selected in the fall, and if not in good condition, that it be worked up and sufficiently enriched to grow the crop. Plow it deeply and give a dressing of bonemeal, the amount depending on the condition the ground is in. Anyway, from 500 pounds to a ton per acre won't be too much; this should be harrowed in and not allowed to lie upon the top. If available, stable manure will do to put on in the Fall in place of bone; if the ground cannot be got ready in the Fall then plow it as early in the Spring as possible and give it a dressing of bonemeal, not manure. In preparing the ground it will need to be plowed, harrowed, and rolled as often as necessary to get it in good order, as it will be found almost useless to try to grow Dahlias in rough ground. The amateur can follow out his plan, using spade or fork.—R. A. VINCENT in *Southern Florist*.

Propagating Monthly Roses.

Cuttings made from monthly Roses during the summer set in sandy soil in a shady situation would do well. Some cover them with a glass jar. The soil should be kept moist until the cuttings are rooted when they may be taken up and set where desired. It is important that the ground should not be kept too wet when starting the cuttings. When setting the cuttings simply let the top bud protrude above the surface. About three-quarters sand and one-quarter leaf mold or black earth makes a good mixture for starting cuttings.

One of our subscribers in sending in his renewal has this to say about THE MODERN GLADIOLUS GROWER:

"To do without THE MODERN GLADIOLUS GROWER would be little less than a calamity. I take some twenty-five periodicals and a single reading does for all of them except the one about our favorite flower. I have read each number which has appeared in the three years of its existence, three or four times, and more readings await them."

MRS. AUSTIN'S TALKS.

JANUARY PLANS—THE WINTER PORCH BOX.

January is one of the most enjoyable months of the year. I call it my planning month. The holidays are over and in the lull of festivities there is a quiet time for thought. For many years my January thoughts and plans have been of plantings of Gladioli for wholesaling and with the commercial end ever in view, but now I find myself in a beginners class and the purpose in view is the pleasure and happiness to be derived from the cultivation and study not only of Gladioli, but of various flowers, plants and shrubs that help to change houses and lots into homes and gardens and I believe there are others who will enjoy this study with me.

With the falling of the last leaves of autumn, the porch boxes were emptied of the plants and vines that had delighted us during the summer, but why should those boxes be empty and the porch without its decoration through the winter? With those boxes filled with evergreens the porch will then present an inviting and cheerful appearance, and it is not too late to do this now.

The nurseryman will make suitable selections or one can do his own choosing for almost any of the pines or firs in small sizes may be used. Some good ones are Austrian Pine, Norway Spruce, White Pine, American Arborvitae, Boxwood, and Dwarf Pine. Those in various sizes ranging in height from eight to eighteen inches with *Suffruticosia* four to six inches for edging will make a fine display. The little trees are dug with a ball of soil which holds the small feeding roots intact. Put a little garden soil in the bottoms of the boxes, remove the root wrappings carefully, set the trees in place, adding the edging, then fill in with soil, packing it firmly. There is no end of pleasure in a winter box of this kind and in early spring the little trees may be planted permanently in that bare spot you have long thought of brightening.

The catalogues are coming well now, and as the high price of paper has pretty well weeded out the worthless ones, we may be quite sure that the catalogue man has something worth while to offer. First, select the space for planting and do not forget that flowers are no longer a luxury but a necessity. So plant as many as you can well care for. One should plant largely of Gladioli for cutting, because they are unequalled in variety of coloring

and as an all around flower for decorative use. In order to have them in quantity, one should arrange to do the work in the easiest and most effective manner. Have your tools ready and remember that the cultivator and weeder are two tools that will be in use a good share of the season. If your plot is to be large enough to admit of horse power, you should have a horse cultivator and weeder and if a small plot, a hand garden cultivator, and garden rake. Whether a large or small plot for best results from least labor, plan to plant the bulbs (any size) in rows so that the system of alternate ridging and leveling may be followed. Plan for a test plot where you can test out novelties and make comparisons. Select your varieties now and plan to plant them so the colors will harmonize when in bloom. Get some seed from choice varieties and try growing a few seedlings next summer. You will find it most interesting and you might have a *winner* among them. Of course you want flowers the season through and for the first planting procure large bulbs of early blooming varieties. Plant in soft, mellow soil. It is better for the very early ones to plant somewhat shallow as the surface soil is warmed and the bulbs start into growth quickly. They can be ridged as they grow, thus giving good root protection and support for the plant.

MRS. A. H. AUSTIN.

This issue takes the nature of a special number discussing the status of the amateur at flower shows. We have already printed quite a little along this line and doubtless some of our readers are either tired of the subject or not interested, but as the matter still remains unsettled, we are pleased to give an expression of opinions on the subject and will continue to do so as long as anything remains to be said. This matter will doubtless be worked out to the satisfaction of all concerned and the way to get this accomplished is for every one to have his say and at the same time consider the other fellow's viewpoint.

"I have had the pleasure of receiving your magazine THE MODERN GLADIOLUS GROWER for eleven months and I have enjoyed every one of them. So much so that I am enclosing money order for four dollars for volumes 1 and 2, and three years' subscription to your magazine. I don't want to miss one of them. With my best wishes I am,

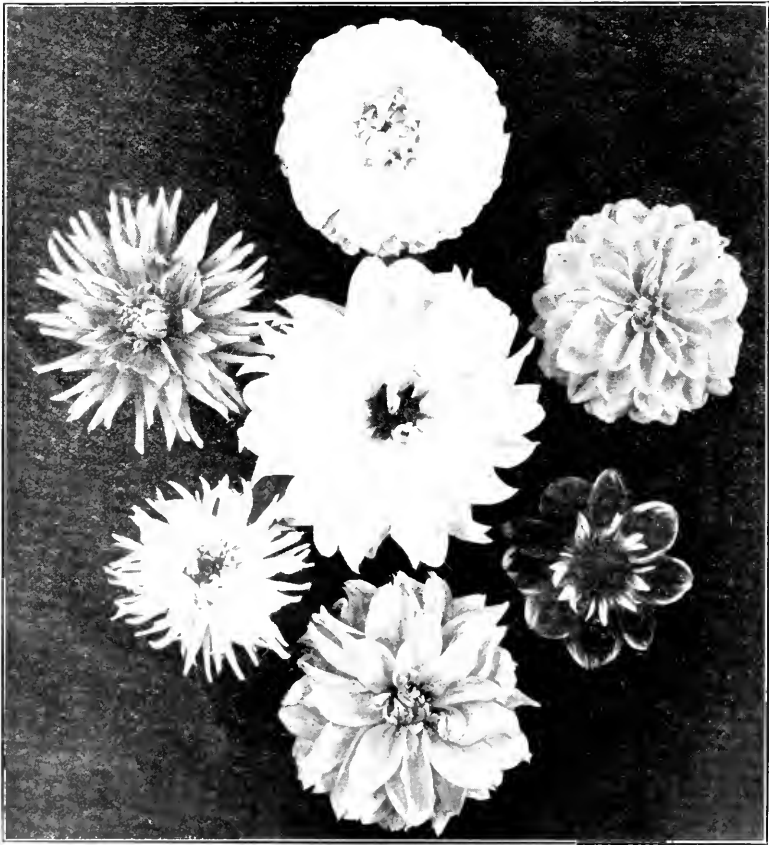
CHAS. E. YOUNG" (Connecticut.)

The Dahlia.

BY JOE COLEMAN.

THE DAHLIA has passed through three hundred years of improvement from the time the Spaniards found the insignificant wild species growing on the cool plateaus of Mexico. Varieties up in the thousands have been introduced, the

enthusiasm for this flower. For brilliancy and beauty during the fall, name the flower that can take the place of the New Dahlia. Briefly, the various forms are here described and the names given of certain varieties that are so good that no



This illustration represents the various forms of Dahlias. Starting at the top on a straight line to the bottom are "Show," "Peony-Flowered" and "Decorative" blooms. The two at the left are "Cactus" forms while the upper one at the right is a "Decorative" and lower a "French Collar." (Note the collar around the center.)

Dahlia being one of the most variable of all flowers, yet attend a fair or exhibition and note how unacquainted the average person is with the modern forms. Yet it is easy to convert one to a limitless

mistake could be made in growing them. However, it is not our purpose to attempt to give a complete list of the good varieties for upwards of three hundred are considered worthy of growing.

[Continued on page 10.]

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
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Special favors to none, and a square deal to all.

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Growers are invited to contribute articles or notes over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business

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January, 1917

No. 1

The Amateur Exhibitor at Flower Shows.

In our "Wayside Ramblings Department" this month, Mr. H. F. Clark in a few words tells the result of the discussion which has taken place during the past two years concerning the status of the amateur at flower shows. While we feel like apologizing for extending the discussion of this subject, yet it is perhaps no more than fair to all concerned to summarize at this time just what brought the discussion about and the present trend of opinion regarding it.

The original controversy was started by an arbitrary ruling by the Exhibition Committee of the American Gladiolus Society at the Boston Show in 1914 disqualifying the editor as an amateur because he frankly admitted that he had sold some of his product. The editor suggested that the question be taken up at the next meeting for discussion, but he was curtly informed that there was no use wasting time discussing a subject which was so plain. Naturally, this sort of a reply would arouse the fighting spirit of most any one and the editor willingly takes full responsibility for the discussion which has ensued on this subject.

Following his disqualification at the Boston flower show as above stated, the

editor wrote letters to various horticultural and floricultural societies for the purpose of getting their opinions on the subject. Various opinions were expressed and they were about evenly divided as to whether the amateur should be allowed to sell his product or not. Where rules have been made entirely by professional florists they have been inclined to favor stringent regulations in classifying the amateur. Some professional florists have suffered from rather reckless competition in prices made by amateurs, and the bitter feeling which has been engendered has caused them to retaliate on the amateur where they had a chance, by putting strict limits on him when he comes to exhibit his product in competition at flower shows. The result of this has been to make it practically impossible for the amateur to show at all, and this is well expressed by Mr. Clark in his letter above referred to.

Practically the same effect has resulted at the flower shows of the American Gladiolus Society. This year in making the schedule of prizes, amateurs were divided into two classes; a class which may be called the advanced amateurs, those growing 1000 bulbs or more, and another class which might be called the small amateurs, growing less than 1000 bulbs. What was the result? There was just one person entered in the small

amateur classes. This person competed for only a few of the long list of 36 separate prizes which were offered in these classes. This demonstrates conclusively that the experience of the New Haven County Horticultural Society, as related by Mr. Clark, has been duplicated by the American Gladiolus Society and it is likely to be still further duplicated by other societies who adopt stringent regulations for amateurs who exhibit at flower shows.

The question resolves itself into a problem of how to encourage the amateur to exhibit. He cannot be encouraged by loading him with restrictions which are impossible or impracticable of fulfillment. Note what Mr. Clark says about the entries of the amateurs this year. He says he believes they were all amateurs in the true sense of the word. Generally speaking, it is safe to allow an exhibitor to classify himself, and yet some rules are necessary. But few people are dishonest enough to enter in a class they are not entitled to show in. The result desired is to give some protection to the small amateur who is growing but a comparatively few flowers, as against the advanced amateur who is growing them in large numbers. Those who have any suggestions along this line will confer a favor on the editor by expressing them for publication. The enthusiastic amateur (big or little) is really the most important factor in the flower business and it is to him that the commercial grower must look for increasing the popularity of his specialty. The amateur must be encouraged. How to do it is the question.

MADISON COOPER.

Amateur growers are often offered real bargains in the shape of collections of single bulbs at a reduced rate. The large growers combine some of their very best varieties in collections in this way to introduce them and amateurs will do well to take advantage of such opportunities. Label each one carefully in planting so it may be kept separate at digging time.

"Double-Decker" Gladiolus Corms.

A friend of ours in the West where the hot weather and drought was unusually severe, has sent us three corms which he calls "double-deckers." They show a mature new corm on top of the old corm and then on top of the first new corm there has formed one or two additional new corms. Our friend suggests that this may be caused by deep planting as he states that they were down about seven inches. We hardly think that this would be the cause. It is our impression that these "double-decker" corms have resulted from the two months or more hot weather, practically without rain. The first corm has probably formed on the old one in the regular way and this corm during the long hot dry period has cured to some extent which has caused it to sprout when the fall rains came on, resulting in a second growth of new corms in one year. Thus do these corms show two ordinary season's growth on one root. If any one has a different theory to suggest, would be glad to hear from them.

Mrs. Austin gives this month a useful hint for planting for early bloom. Shallow planting is the thing if you want quick bloom as the surface soil is warmer and the heat from the sun will reach the corm and make it grow more rapidly if near the surface. It is also suggested that opening trenches several days or even a week or more prior to planting is helpful to warm up the soil.

We must say that subscribers have been very prompt with their renewals and as there was an extra large bunch of them expiring with December, we are naturally very much pleased. There are still a few stragglers who have neglected to send their renewals and we hope that any such will attend to it promptly and not lose the complete file.

Much has been said on the subject of mixtures, both for and against, but we think that most people, even though long experienced in growing the Gladiolus, are well pleased with the mixtures if they are good. Dislike of the mixtures has doubtless come from the old-fashioned mixtures wherein the very poor seedlings predominate. A modern mixture containing largely named varieties, is certainly worthy of any one's time and we recommend mixtures even to the experienced grower. There are always surprises to be had from mixtures and should a part of the bloom be inferior, we can overlook this. Those growing but few Gladioli should grow largely of mixtures.

The National Gladiolus Society, England.

The annual meeting of this Society was held in London on the 9th November last, Mr. P. R. Barr in the chair. The accounts for the year 1915 were submitted and passed, the balance carried forward being £24 15s.

The officers were re-elected.

Several slight modifications in the Rules were made. The annual meeting is, in future, to be held on the date of the R. H. S. March Bulb Show; this will be March 6th, 1917.

The Honorable Secretary, Mrs. G. H. Atkinson, The Flagstaff, Locksheath, Southampton, England, stated that although there had been no show this year, and that the bulbs sent for trial had been few, she hoped to include in the Society's Annual a good deal of useful information. An endeavor will be made to hold a show in 1917, full particulars will be published in due course.

A vote of thanks to the chairman brought the meeting to a close.

Geo. A. Whitney, of Auburn, Maine, is President of the "Maine Bulb and Flower Growers," a new corporation composed of Mr. Whitney, together with Geo. W. Horne, of Lewiston, and Willard A. Noyes, of Auburn, Maine. The members of the new company are all keenly interested in floriculture and belong to the gardeners' union. Interest in the Gladiolus is increasing very rapidly in Maine of late years and the new company starts business with the best of prospects.

Delphiniums.

This class of plants is coming into great popularity in the Pacific Northwest. According to W. Saville, in *Southern Florist*, there are in cultivation many species, both annual and perennial, but the most important are the tall hybrid perennials. They are valuable for their wonderful range of lovely color and great variety in height, from one to ten feet. The colors range from almost scarlet to pure white, from the palest lavender up through every shade of blue to deep indigo; and for the variety and size of their individual blooms, some of which are single, some semi-double and some perfectly double, and all set on spikes ranging from one to six feet in height. About a dozen species have given rise to the cultivated forms.

The combinations in which they can be placed are numerous. They may be used in the mixed border, in masses of groups, in one or several colors, or associated with flowering plants or shrubs. Planted against a mass of evergreens they form a beautiful picture.

Delphiniums can be made to bloom for several months by continually cutting off the spikes after they have done flowering. If the central spike be removed the side shoots will flower and by thus cutting off the old flowers before they can form the base and keep up a succession of bloom. Another plan is to let the shoots remain intact until all have nearly done flowering, and then to cut the entire plant to the ground, when in about three weeks there will be fresh bloom. In this case, however, to keep the plants from becoming exhausted they must have a heavy dressing of manure, or applications of fluid manure.

Gladiolus—Myrtle.

[Subject of illustration on our front cover page.]

This month we are illustrating the Gladiolus, *Myrtle*, on our front cover page. As *Myrtle* has now been in commerce for several years and bulbs may be had at reasonable cost, we recommend that those who are not growing it should try a few this year. *Myrtle* is almost in a class by itself and, although not a rank grower, yet it is vigorous and healthy and florists especially should be greatly interested in it.

One of our subscribers asks for a light blue Gladiolus, something like *Queen of Blues* in Hyacinths. Can any of our readers tell him of anything that would come nearer to it than *Blue Jay*?

The Dahlia.

Continued from page 6.

The true form of the Cactus Dahlia has narrow incurved or twisted petals and has been brought to almost perfection in the hands of the English grower. No Chrysanthemum can compare in coloring and but one fault may be said of certain varieties of the English Cactus, and that, the immense blooms are inclined to a weak stem, causing the flower to look down, as it were.

Among the worthy varieties of this type are *Crystal*, *Mrs. Douglas Fleming*, *John Riding*, *F. W. Fellows*, *Miss Strdwick* and *Rev. T. W. Jamieson*. The Hybrid Cactus type has broader petalage, the rays more blunt and not so long. Some excellent varieties of American origin of this type are being introduced. *Countess of Lonsdale*, *Kalif*, *J. H. Jackson*, *Golden Gate*, *Marguerite Bouchon* and *Rene Cayeux* stand out as worthy examples of this form.

Decorative Dahlias are large, flat, double flowers full to the center, and widely grown. The French have produced some of the very finest sorts: *D. M. Moore*, *Jean Charmet*, *Delice*, *Princess Juliana*, *Le Grand Manitou*, *Hortulanus Fiet*, *Breezelawn*, *Lucero* and *Minnie Burple* are all good.

Show Dahlias are the ball shaped forms of mother's time and how popular along the years. A few of the best are *W. W. Rawson*, *A. D. Livoni*, *Arabella*, *Yellow Duke*, *Caleb Powers* and *Dreer's White*.

Now comes the Peony flowered Dahlias, so called from resemblance to the semi-double Japanese Peonies. This type shows an open center usually partially covered by the inner rays in a twisted form. Holland is the home of the Peony-flowered Dahlia and the Dutch must be thanked for giving us such a valuable acquisition. *Geisha*, *Bertha von Suttner*, *Dr. Peary*, *Gloire de Baarn*, *Queen Wilhelmina*, *South Pole*, *Caccilia*, *Mme. A. Coissard* and *Hampton Court* are all so good that not one is unworthy of any collection.

Collarette Dahlias are of French origin and so named from having a small distinct collar usually of a different color around the disk. The flower is single in form. *Maurice Revoire* and *Souvenir de Chabanne* are among the best.

Single Dahlias are not so popular as the others, but the Century type is taking the lead over the older and smaller forms.

Pompons are miniature show Dahlias. *Klein Domitea*, *Nerissa*, *Little Herman*, *Snowclad* and *Abewine* are excellent examples of this type.

[To be continued.]

Kunderd Defends the Iris.

I always read *The Review* with both interest and profit, but the comment on C. S. Harrison's article on the iris as the national flower, by John J. Hitz and my good friend B. C. Auten, in a recent issue, were of special interest to me. While I am a great admirer of the Goldenrod, I must differ with Mr. Auten on his severe criticism of the Iris. Last spring I had the pleasure of seeing Bertrand H. Farr's wonderful collection of Iris in bloom at Wyomissing, Pa., and I believe if Mr. Auten had been with me he would have been as enthusiastic over the marvelous beauty of the newer Iris as I am. Both Mr. Auten and myself are great lovers of the Gladiolus, but if there is any other one flower I should select it would probably be the Iris. Last season I had a choice collection of Mr. Fryer's new Iris seedlings in bloom. I certainly believe in the newer Iris, as well as in the better standard kinds, and believe if the general public could see them in bloom their variety and beauty would take the country by storm and there would not be stock enough in existence to half supply the enormous demand.

While writing my "opinion" it might be helpful to some of your readers to relate my method of handling the cut blooms of the Iris. As is well known, this flower when in bloom is fragile and is therefore susceptible to damage from breakage in transportation and handling. I have found a good way to get the best results from the Iris as a cut flower, especially where it is to be packed for shipment. It is to cut the spikes with the best unopened buds and not the spikes which show the finest blooms at the time of cutting. When wanted for the day following the cutting of spikes, I aim to cut with as many large buds as possible. I certainly believe the Iris will become popular as soon as the wonderful newer varieties become better known and better methods of packing and transportation are devised. I have no flower to suggest to be adopted as our national flower, but cannot see how a more beautiful flower than the Iris can be found, nor one which is so adapted to universal culture and at so little expense.—A. E. KUNDERD in *Florists' Review*.

Early purchase of Gladiolus corms is desirable this year if it ever was. Those who are slow in buying are likely to get left on the varieties they want. Some dealers report certain varieties sold out already.

WAYSIDE RAMBLINGS.

FORCING GLADIOLI IN COLD FRAMES.

TO THE EDITOR:—

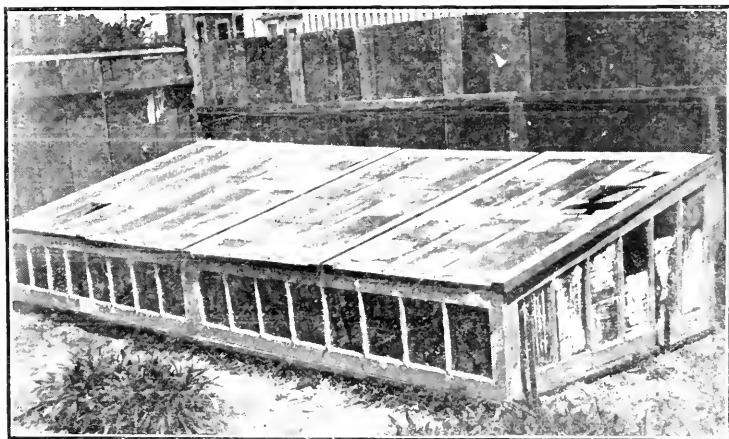
My experience in an experimental way this last spring may prove useful to some of your readers. About March 25th we prepared the bed in the usual way and planted *Halley*, *Mrs. Francis King* and *Early Amethyst*. April 14th the *Halley* appeared above ground and *Early Amethyst* about four days later with *Mrs. Francis King* about a week later. On June 21st I cut the first *Halley* and shortly afterwards *Early Amethyst* and *Mrs. Fran-*

possible to plant earlier than March 25th earlier bloom from the same varieties could doubtless have been secured. Another point would be to plant bulbs already well sprouted.

DEFINING THE AMATEUR.

TO THE EDITOR:—

Referring to the definition of the amateur floral exhibitor as given by the New Haven County Horticultural Society which was printed and commented on on page 129 of the September issue of THE MODERN GLADIOLUS GROWER: This was adopted after some of our members met with a



Cold frames for forcing Gladioli used by "H. K." (See description.)

cis King. Next year I will try the plan on a larger scale and plant earlier. The size of my cold frame (which is here illustrated) was 6 x 12 ft. and 14" at one side and 27" at the other side, giving a good slant for the drainage of rainwater. After freezing weather is past all sash were removed leaving the Gladioli in rows same as those planted in the field. With cold frames there is no expense for heating on cold nights, the sash are simply closed down. During the day the sash may be taken off entirely or only opened for ventilating, but preferably folded or laid to one side if the day is sunny and warm. This plan is worth trying by those who desire earlier bloom. H. K.

Note by the Editor:

If "H. K." had used *Pink Beauty* he would doubtless have had bloom even earlier than June 21st. Also, if it were

change of heart. You may remember having corresponded with me on this subject and that I did not at first favor having the amateur sell at all. We stuck to this idea until the exhibits by amateurs at our flower shows fell off to a mere nothing. This year changing the definition we had a good number of entries from the amateurs and I do not believe that there was a single one of them but what was an amateur in the true sense of the word. So you see that by a good wholesome discussion of a subject we moved forward and good comes from it.

H. F. CLARK.

GLADIOLUS—"INCONTESTABLE."

On page 141 (October, 1916, issue) you ask: "Can anyone tell us who originated it, and more about it?" It was awarded an Award of Merit by the National Gladi-

olus Society, London, in July, 1913, and also by the General Bulb Growers' Society of Haarlem, Holland, in the same year.

The following particulars appear on page 42 of the National Gladiolus Society's Autumn Handbook, 1913:

"Gladiolus *Lemoineii* *Incontestable*, pure white, in the centre spotted orange and carmine; originated from Guernsey, exhibited by Alkemade & Co., at Noordwijk."

In the same Society's Annual for 1915, it is noted as having been placed on the Society's Register, that the date of flowering was July 11th, its height 3 ft. 9 in., and that the flowers were very large, and it was a fine show variety.

I may add that I have grown it for the last two or three years and it never fails to attract attention as 'one of the best.'

G. C.

WAS IT AN OMEN?

Through my "Glad Gardens" runs a grass path on each side of which I always plant named varieties, in small lots, so that visitors may see and know the many sorts.

Here I planted, last spring, *General Joffre*, and the next that came, at random, from my basket was *Hohenzollern*. I hesitated, decided these two should not be permitted to come together, and in selecting another there came forth, appropriately, *War*, to go and be between them. Then, with intent, I let *Peace* follow these, but to complete the story I must add, with truthfulness, that *Peace* never came to fulfillment. And the greatest of them was *General Joffre*. Was it an omen?

C. R. H.

NATURAL ELIMINATION OF DISEASE IN GLADIOLI.

TO THE EDITOR:—

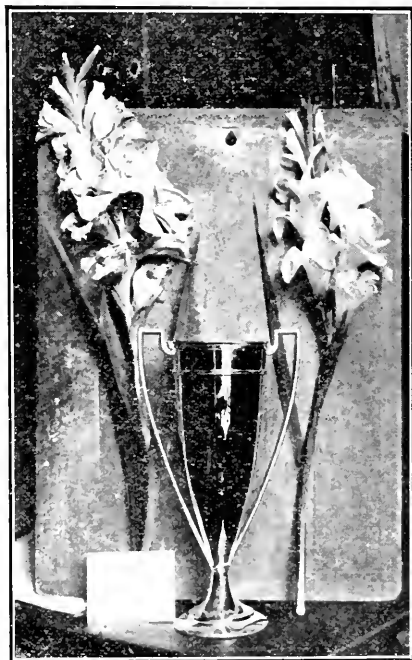
Some time ago we had correspondence regarding scab disease. Some of my stock was quite badly infected. It may interest you to know that I have not found a single bulb this fall which showed presence of this disease. This would seem to indicate that the disease is not necessarily infectious from year to year or from bulb to bulb.

As a test I planted a dozen diseased corms in with the healthy ones last spring. They were so badly diseased that only one of them survived, but the new corm appears altogether free from disease although of small size, and no disease appears in the vicinity where the diseased corms were planted.

H. M. G.

Gladiolus Bulbs in California.

Many years' close observation, coupled with some costly experience, leads me to advise digging Gladiolus bulbs each year. It cannot be good for the new bulbs to set for months, during our rainy months, on top of an old decaying bulb that is a wet, putrid mass, until dissolved by the process of decay. How much better to dig in October, dry thoroughly, and replant in January, cutting off old top and removing old bulb at time of digging. The rotting, spent bulbs, as well as the newly-formed one, are eaten into by sow-bugs, ear-wigs, millipedes, earth worms and other pests, and as these attack the root crown it is best to have them out of the soil, and early, too. Also early in again, and never in the same soil they were grown in last year.—ERNEST BRAUNTON in *California Cultivator*.



CLEVELAND FLORISTS' CLUB CUP.

Won by Joe Coleman, Lexington, Ohio, at the Cleveland Show of The Gladiolus Society of Ohio, September, 1916.

The photograph hardly does justice to the beauty of Mr. Coleman's seedlings which were at their prime on the first day of the show and drew forth many favorable comments.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Trouble in Keeping Gladiolus Corms.

TO THE EDITOR:—

I have had trouble in keeping Gladiolus corms owing to drying out. I keep them in a basement room which is cool, but it seems to be too dry and this winter I am trying a closet in an attic room and if it will do no harm I am thinking of putting a dish of water in the closet to lessen the dryness.

What would happen if I packed the young bulbs (one year old and two year old) in sand as I do the cormels? The mortality among the young bulbs has been much greater than among the larger ones and last winter I lost a third of my one-year old corms. Those that lived did well enough, though few of them bloomed. The cormels keep well in sand; why not the young bulbs?

B. W. S.

Answer:—It would seem that a basement room which you can keep cool, and if you can keep it closed up tightly, should make a good storage space. If it is necessary to open it to the outer air during cold weather to maintain temperature, this results in a very dry condition of the room as raising the temperature of the incoming air to storage temperature means drying it excessively. Whether a closet in a room on an upper floor will answer or not is a grave question. There would certainly be a great variation in temperature and humidity as well. It is doubtful if you can regulate the humidity properly by putting an open dish of water in the room although this would help to keep it moist during a very cold time and also it would serve as an indicator of danger of freezing. There is really no suitable place for storage of Gladiolus corms except such a place as will keep potatoes in good shape. It would probably be advisable for you to construct a specially built room in the basement for this purpose. This could be on one side or one corner with a window opening outdoors for ventilating the room. This could be constructed of 2" x 4" studs faced each side with matched lumber and the studs filled with mill shavings. A reasonably tight fitting door should be provided and the ceiling of the room should be filled with mill shavings as well.

Your suggestion to store planting size corms in sand is noted and there can be no objection to this if the sand is dry

and the corms well cured before packing them. Would recommend that you examine them from time to time to see how they are keeping. One of the most experienced growers recommends the practice of storing in dry sand.

Root Lice on Asters.

TO THE EDITOR:—

I have 1,600 Aster plants in a field that was in corn for several years. We find that the roots are infected with the corn root aphid. Is there any remedy for the trouble? Would a dressing of nitrate help any? They have made little growth since they were transplanted six weeks ago.

C. S. C., Illinois.

Answer:—The only remedy for the root aphid that I can suggest is to soak the ground around the plants with a strong solution of tobacco made by boiling tobacco stems. There are also a number of preparations of the sulphate of nicotine which can be diluted and used. One of these is Black Leaf 40. Another is Aphine, made by the Aphine Co., Madison, N. J. One pint of the last will make 96 pints. I have used this successfully. I would draw the soil back and make a sort of basin around the plants and soak them with this. The tobacco will help the plants too.—W. F. MASSEY in *Market Growers' Journal*.

American Gladiolus Society.

We learn from Secretary Youell of the American Gladiolus Society that the vote of the membership was strongly in favor of the next annual meeting and flower show being held in New York City next August. It is hoped that the date of the flower show can be made to coincide with the annual meeting and flower show of the Society of American Florists and O. H. We understand that the Museum Building in the New York Botanical Gardens, Bronx Park, has been secured for the flower show and meeting. More specific announcement of the show and meeting will be made later.

An Ideal Flower Garden for a Country Home.

In laying out grounds for country homes or remodeling them, space should be of the first importance, and where space permits there is no better arrangement than a fine border on one side of the lawn with a driveway between the lawn and the border, leading from the street to the house and barns. The border should be wide enough to have a nice variety of shrubs for a background, and there should be space for the hardy perennials and bulbs, which should not be planted solidly but placed in clumps and arranged according to height and blooming season and as to color effect.

I will mention a few of the hardy shrubs and plants that we can all grow with success. While the catalogues are filled with a large list of so-called hardy stock, we must remember that we live in a good sized country and what would be hardy in Southern Iowa, Missouri and Illinois, would not stand the winters of Northern Iowa or of Minnesota or other localities of the same latitude. In shrubs we can be sure of a variety of lilacs, snowballs and hydrangea paniculata. Some of the newer varieties are fine and bloom in August, when few other shrubs are flowering. Spirea Van Houttii, best known as Bridal Wreath, we might include and a few of the hardy vines if a trellis or other support was given for them, such as clematis paniculata, coccinea and jackmani, the large purple and white honeysuckle, Chinese matrimony vine, etc.

Among hardy roses, which are called the queen of all flowers, are the Rugosa type, which will stand the winters with no protection and continue to flower all summer. While the flowers of that type are single or semi-double, the bushes would be handsome without any flowers. This type also produces hips, which adds to their attractiveness, and these may be made into jelly in the fall if so desired. I would advise to plant some of the most hardy of the hybrid perpetual roses, such as *General Jacqueminot*, *Magna Charta*, *Mrs. Chas. Wood*, *Mrs. John Lang*, *Mad. Plantier*, with some of the climbers, such as the *Rambler* in variety, *Prairie Queen*, *Baltimore Belle* and, perhaps, some others, with the understanding that the hybrids and climbers should have protection in some form for the winter months.

Then in hardy perennials there is such a variety to select from that one hardly knows where to begin or when to stop. Of course everyone wants a few peonies,

and some of the hardy phlox, in such a variety of color. Then the delphinium, or hardy larkspurs, are fine bloomers. The blue and white platycodon are sure to flower, while the German iris are good and the Japan iris are fine flowers, but have to have good protection to stand our winters. For fine white flowers we have the showy achilleas in variety and gypsophila paniculata, called baby breath as a common name. Then we must have plenty of space for a variety of annuals, such as sweet peas, cosmos, pansies, verbenas, etc. Also, we would grow geraniums in variety, a few summer carnations, and the selection can be large or small, but almost every one will want some dahlia and Gladiolus bulbs. Those that like yellow, or lemon lilies, can plant them and have a mass of flowers during June. The Japan lilies, especially the rubrum variety, are good bloomers and quite hardy.—M. H. WETHERBEE before Minnesota State Horticultural Society.

The variety, *Mary Fennell* which is advertised on our inside back cover page this month, and of which a beautiful colored illustration is shown, is worthy of a place in any garden. Those who are not growing *Mary Fennell* should try a few for 1917.

CLASSIFIED ADVERTISING.

Growers having surplus stock for sale will find this department effective in disposing of it. Five lines (about forty words) \$1.00 per insertion. Additional lines 15c. each.

SEND your name for a copy of our surplus list of the best Gladioli and Dahlias. We grow for the wholesale cut flower trade and have few varieties but they are the best of their color. Here is your opportunity to secure good stock for cut flowers at a low price. Delivery now or in spring. Oakland Gardens Nursery, Walled Lake, Oakland County, Michigan.

W. E. KIRCHHOFF CO., Pembroke, N. Y., growers of the finest Gladioli, such as Pendleton, Panama, Niagara, Pink Perfection, Europa, Mrs. Fryer, War, Peace, etc. Correspondence solicited.

WANTED—200,000 Gladiolus Bulbs. These must be of first class mixture and of a size approximately 1 inch diameter. No objection to a moderate percentage of bulbs as small as 1/4 in. Explain fully what varieties and colors the mixture is composed of and send samples and quote prices to HENRY FIELD SEED CO., Shenandoah, Ia.

SPECIAL BARGAIN—100 plump, sure-flowering Gladiolus Bulbs, mixed varieties and colors, for only \$1.25; 50 for 75c. Sample dozen, post-paid far as fifth zone, 25c. A surplus enables me to make these bargain prices. HOWARD GILLET, Lebanon Springs, N. Y.

One of our subscribers wants to know what proportion of formaldehyde should be used in water for treating diseased Gladiolus corms. This information was contained in the March, 1914, issue of THE MODERN GLADIOLUS GROWER.

The same correspondent wants to know about the use of corrosive sublimate for the purpose. Have any of our readers had any experience with this material? It is a deadly poison and dangerous to have about and we personally would prefer to use the formaldehyde, although this too, is classed as a poison.

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H. T. Taplin, Newfields, N. H.

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America, soft pink	\$.50	\$1.50	Loveliness, cream apricot	\$1.00	\$5.00
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Baron Hulot, dark violet.....	.50	1.50	Panama, deep pink.....	1.00	5.00
Brenchleyensis, verm'l scarlet .50	.50	1.50	Peace, white, red blotch.....	1.00	5.00
Chicago, white early.....	.60	2.00	Pink Perfection, fine pink.....	1.50	7.00
Empress of India, dark maroon .75	.75	2.50	Rochester White, pure white..	1.50	7.00
Europa, snow white.....	1.00	5.00	Schwaben, pale yellow.....	1.50	7.00
Glory of Holland, white.....	1.00	5.00	Brunswick Mixture.....	.40	1.00
Halley, large salmon.....	.50	1.50	Groffs Hybrid Mixture.....	.50	1.50
Lily Lehman, white rosy tinge 1.00	1.00	5.00			

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SPECIAL OFFER—To introduce my Gladioli I will send one each of the 17 named varieties as above and 3 Groffs Hybrids, 20 bulbs in all, blooming size, the lot for only \$1.00, post paid.

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Winter Orchid, mixed per oz.	35c.	All Kinds Fine, Mixed per oz.	15c.
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AMARYLLIS (Hippeastrum)—The most beautiful and gorgeous of all the bulbous plants. With their brilliant colors, gigantic size, there is no other flower that will make a grander show than the Amaryllis. With their three to five large six to nine inch flowers on each scape. My stock has been crossbred until it is now beyond doubt as fine as can be produced. Bulbs 50c. each, \$5.00 per dozen; for Mixed Unbloomed Seedlings. Bloomed and Selected Fancy Stock \$1.00 each, \$10.00 per dozen.

PANSY PLANTS—Large flowering. None better. 12 for 40c; 36 for 50c; 100 for \$2.00; 300 for \$5.00, postpaid. One ounce of choice Sweet Pea seed free with each dollar's worth.

C. S. TAIT - Brunswick, Georgia

From New Zealand:

MR. WILLIS E. FRYER,
Mantorville, Minn., U. S. A.

Dear Sir:—Referring to yours of March 16th last, we have this to state that we have flowered your Gladiolus novelty Mrs. W. E. Fryer, and are very much pleased with its pure, bright color, and would ask you to be so good as to send us fifty as early in the fall, as possible.

We are yours faithfully,

ORR BROTHERS,
Lower Hutt, New Zealand.

I have a large supply of this variety and have reduced the price as follows:

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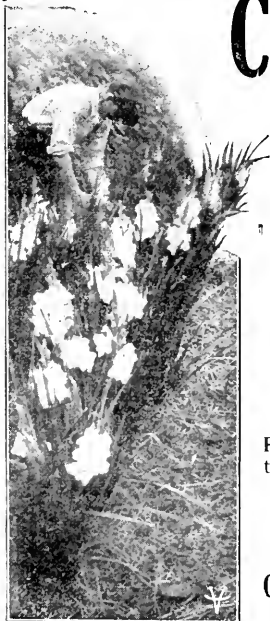
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IT IS NEEDLESS to comment on the success of the Austin originations. These varieties have been developed with the firm belief that the tallest and most graceful Gladiolus in existence has been produced. You will not have the *best* in Gladioli until you grow them. A magnificent collection of eight sorts is now offered the public.



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"Evelyn Kirtland is the most magnificent Gladiolus I have ever seen and I have seen most all there are."—*Wilbur A. Christy, Secretary-Treasurer Gladiolus Society of Ohio.*

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Hillegom, Holland

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Set 4 " 12 " " "	5.00
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AND OUR CATALOGUE OF

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are now ready. Drop a few lines and ask for copies which will be mailed directly after receipt of application. Our Gladiolus Catalogue contains 20 new varieties of our own hybridization of 1911 and another list of 23 new varieties of recent introduction which we bought stock of other specialist here.

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CATALOG for 1917

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PERFECTION, SCARSDALE,
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Send for our retail list describing nearly 200 of the better old and new varieties. All of our own growing at fair prices. Wholesale list for dealers and large growers.

We make a specialty of furnishing planting stock of the best new and standard varieties to other Gladiolus Growers, Florists, Market Gardeners, Nurserymen and all others who grow Gladioli commercially.

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GLADIOLUS SPECIALIST

ALBERT LEA - - - - MINN.

THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
Published Monthly by Madison Cooper, Calcium, New York.

Vol. IV.

FEBRUARY, 1917

No. 2



GLADIOLUS—LILY WHITE.

[For description see page 20.]

A Description of New Varieties of Phlox and other Flowers Developed by Willis E. Fryer of Mantorville, Minn.

BY CLARENCE WEDGE in *The Farmer*.

SOME time last June we told the readers of *The Farmer* about our visit to Mr. Willis E. Fryer's place at Mantorville, Minnesota, in the iris season. In August we yielded to the temptation to make another trip to see his large collection of Phlox and Gladioli in full bloom. At the time we made the visit, August 19th, everything in Southern Min-

nesota was suffering from the extreme heat and drought which had prevailed for several weeks, and flowers of all kinds were withering almost as fast as they opened. But even under such unfavorable circumstances, the fields of Phlox and Gladioli were among the most brilliant and interesting that we have ever seen, a display well worth the 50 mile trip.

size. *Dr. Christopher Graham* is a deep pink, somewhat later than *Amelia* and seemed to stand the heat remarkably well. *Dr. A. L. Baker* is a fine plant of very even height—magenta color.

About the nearest approach to blue that we have ever seen in a Phlox is one that he has named *Mrs. K. Andrist*. While the dark shades in the Phlox are

not generally so attractive, they furnish an interesting variation and one variety will be an acceptable addition to any collection.

One of the most interesting things in Phlox that we have ever seen was the *Curiosity*, which produces blooms from the same plant in all shades from pure white through all variations in marking to nearly pure red. Its name is certainly appropriate. From this variety, Mr. Fryer has made a selection of a pure white seedling that comes very true to color and forms one of the most satisfactory of all the whites. This he has named in honor of his wife, *Mrs. Fryer*. I saw this variety in several places on his grounds and it seemed everywhere to be one of the rugged kinds that make good in unfavorable seasons. If I remember rightly, Mr. Fryer regards this as one of his best all-purpose whites he has ever tried.



Showing the Ornamental Plantings About the Home of Willis E. Fryer.

Among the varieties of Phlox produced by Mr. Fryer, the *Amelia* impresses me as not only one of his best, but one that should take a high place among standard varieties. It has a deep, pink eye, shading out to a pale lavender-white. I have had this on my own grounds for some time and have found it very healthy and satisfactory in blooming and would place it easily among my best ten varieties.

Mrs. Mellinger, another one of Mr. Fryer's own Phloxes, is a fine, rosy red of solid color and florets of the largest

Among the Gladioli I was again greatly impressed with the variety that he has named *Mrs. W. E. Fryer*. It is certainly one of the most robust and dependable of the red varieties and seems especially adapted to landscape effects. Unlike *Mrs. Francis King*, which has enjoyed great popularity, it requires no staking but stands with a stiff, strong stem, perfectly erect and sending out several branches, making as full and rich a show of color on the lawn as any variety that I have ever seen. The color is particularly rich and satisfying. It is a good propagator, full of life and vigor, and

so much popularity. If it is really better than the *Panama*, Mr. Fryer ought to be a judge. It deserves a large place with Gladiolus growers, for varieties of this soft pink shade seem to be more popular with the public than any other.

Mr. Fryer is having good success with the yellow variety of Gladioli originated by Mr. Black, the *Golden King*, and regards it the best of the yellows with blotch of red in the throat.

Among the ruffled varieties of Gladioli, the *Mantorville* is one of Mr. Fryer's naming, a fine yellow, sometimes tinted with pink. It is proving a good propa-



One of Mr. Fryer's Phlox Beds, all new Seedlings. The row in the center is the variety which is known as *Mrs. W. E. Fryer*.

should succeed wherever the Gladiolus can be grown.

I have seen a good deal of the *Niagara* this season and find it everywhere making a good account of itself. It is clearly one of the best of the yellow varieties, and deserves a place in every collection. I thought it stood the heat particularly well during the trying days of August.

As an extra early variety of Gladioli, Mr. Fryer favors the *Halley* rather than the *Pink Beauty*, which is commonly used for first early. This is also the judgment of Mr. Ralph Huntington and we think it may safely be set down as one of the best, if not the best, for first early in the North.

Mr. Fryer prefers the *Arizona* Gladiolus to the *Panama* which has lately had

gator and may turn out to be one of the best of the yellows.

There was nothing at Mr. Fryer's place that I enjoyed more than his wonderful Larkspurs. I wish I could say something that would give the Larkspur a boom all over the North. It has every quality required in a popular flower. There are few perennials that do not suffer winter injury in some peculiar seasons, but I do not remember of ever losing a Larkspur in the worst winters we have ever had. It may now be enjoyed in all shades from pure white to the darkest blue with an infinite variation in shape, size and distribution of color. There is certainly no other blue flower to compare with it. It is not only one of the stateliest of border plants, but when cut and brought into the house

it is as graceful and enduring as anything that grows. If given an occasional pruning and not allowed to go to seed, it will go on blooming all summer. With us it is generally among the few perennial flowers that are destroyed by the freezes of late October. Mr. Fryer has a number of sorts that he has selected and may send out under names in the near future. We have never seen a finer collection and have no doubt that it is among the best in the country.

Gladiolus—*Lily White*.

[Subject of illustration on our front cover page.]

Originated by A. E. Kunderd, Goshen, Indiana. It is of the same family as *Chicago White* and partakes of the same valuable features of that variety as to earliness, forcing qualities and rapid increase. This new all white variety is offered for the first time by Mr. Kunderd, the originator, in his 1916 catalogue.

Lily White is considerably taller than *Myrtle* and the flowers are of good size and fine form, especially adapted to florists purposes. The spike is tall and graceful and there are from five to seven flowers open at a time. The color is as its name indicates, white, with a faint scarcely visible sulphurous tint in the throat. This tint entirely fades out when the spikes are placed in water. It is one of the very earliest, and when forced, starts quickly; and from fully matured corms grows as many as three and sometimes four fine flower spikes.

As a forcing variety, *Lily White* has been tested and found to be reliable and the originator confidently believes that it will prove to be the long desired florists' all white Gladiolus.

The cormels are of good size, numerous and germinate readily and by reason of its good propagating qualities it will soon be in fair supply.

Two spikes of *Lily White* were awarded honorable mention at the 1916 Gladiolus show of the Massachusetts Horticultural Society. Too small a number of spikes were shown for a higher award.

Lime on Lawn and Gardens.

The use of thoroughly slaked lime as a top dressing on lawns and gardens during the fall or winter is beneficial. Spread very thinly and at different times it gives the best results, and a half pound should cover from 30 to 50 square feet. There are few soils but what are benefited by judicious liming and, except perhaps for potatoes, there has been no objection made to lime in moderate quantities.

Varieties of Gladioli which Have Been Illustrated in The Modern Gladiolus Grower.

From time to time we have asked for good photographs suitable for illustrating single varieties of Gladioli on the front page of THE MODERN GLADIOLUS GROWER. It has been suggested that it would be a help to those who desire to assist us in this matter, if we would publish a list of those varieties which have already appeared in our first three volumes. We readily adopt the suggestion and the following alphabetically arranged list may prove useful for reference:

	Vol.	Page
America.....	1	1
Baron Joseph Hulot.....	1	33
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Charlemagne.....	3	109
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Helen Sill.....	3	91
Hyde Park.....	2	57
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I. S. Hendrickson.....	2	87
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Mrs. Dr. Norton.....	3	165
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Mrs. Francis King.....	1	17, 22
Mrs. Frank Pendleton.....	1	113
Myrtle.....	4	1
Nanus.....	1	131
Niagara.....	2	71
Panama.....	1	157
Peace.....	1	81
Pink Beauty.....	3	137
Pink Perfection.....	2	165
Princeps.....	1	65
Schwaben.....	2	13
Scribe.....	3	45
War.....	3	1
Yellow Hammer.....	3	151

Those having photographs of other of the better known varieties suitable for illustration will confer a favor if they will lend them to us. We want especially the older and better known sorts but can always use some of the more recent introductions providing they are meritorious and have proved to be prize winners. If a sufficient number of photographs were available we certainly would not stop with illustrating one variety and only on the front cover page. We would be glad to illustrate as many as suitable photographs can be obtained for. To reproduce in good shape photographs must be clear and preferably with a glazed or smooth finish.

MRS. AUSTIN'S TALKS.

HARDY CHRYSANTHEMUMS.

Like children sometimes decide their momentous questions, I determined that the first flower to meet my gaze from the first catalogue received in 1917 should be the first plant, if suitable, to be planted in my new garden. And I enjoyed slipping the catalogue from its envelope, closing my eyes and opening the book at random. Was it a guiding spirit or just plain luck that two full pages of listed Chrysanthemums were before me. Ah, I closed my eyes for the second time, the years rolled backward and I again had a collection of choice mums that I was growing and training with the best skill that my limited knowledge and facilities could furnish. The Chrysanthemum shows of ten consecutive years were, briefly reviewed, and old friends such as *Uncle Sam*, *Black Hawk*, *Major Bonnafon*, *Timothy Eaton*, *Merza* and others again greeted me. We called them the "tender large-flowering varieties," and how ruthlessly we pinched and pruned to obtain those large blooms as well as to give symmetry of form to the plant. Then after all our trouble perhaps a bunch of Hardy ones, which had received no attention to speak of, would carry off the prize for Best Red or Best Pink, or Yellow regardless of class. For it is true that the Hardy Chrysanthemum can be grown to perfection with comparatively little cultivation. At the time of the Chrysanthemum shows I have mentioned, most of the hardy ones were rather small and not considered of much value, but with them as with the Gladiolus, the hybridist waved his wand and a wonderful development followed. From a few ordinary ones have come hundreds of distinct new varieties that are beautiful in both form and color. These are divided into four classes called, The Large-flowering or Aster Varieties, Small Button Varieties, The Anemone, and Single-flowered. While not of the size of the Greenhouse varieties that we see at the great fall shows, many of the Hardy ones may be grown to very good size, if side buds are pinched out and only one flower allowed to each branch and, of course, given good cultivation. *Lillian Doty* is one that will respond to extra care and pruning by producing large globe-shaped blooms. The Large-flowered Hardy ones are often spoken of as the Aster varieties because of their resemblance to the aster in form, but the

quilled and incurved ones are equally beautiful. Their greatest attraction, however, is in their sprays which are charming, and it is hard to say which of the four classes are the most beautiful. The little Buttons are so bright, while the Anemones are unequaled in gracefulness.

A few of the very pretty ones are: Large-flowering—*Bradshaw*, large flowers of silver pink. *Queen of Whites*, long stems. *Windless*, orange yellow, large. *Julia La-grave*, crimson maroon.

Button varieties—*Cerise Queen*. *Doris*, pure bronze. *Alice Carey*, pure yellow. Anemone-flowered—*Earl*, pearl white with silver rose center. *Barncey*, golden bronze. *Garza*, white with quilled petals.

They begin to blossom in September and continue loaded with flowers until severe freezing weather, are entirely hardy, living over winter without protection. Their uses are many and are fast becoming a necessity. They fit in nicely planted beside Peonies as a border for drives, the bright green cut foliage making a rich background for the Peony blooms, the plants of which in turn serve a good foil for the mums in their flowering season. Nothing will brighten the hardy border equal to the Chrysanthemum as it is the most brilliant autumn flower, and they are especially beautiful dotting the shrubbery of the foundation plantings of the house. Every garden should have at least a few of these Autumn Beauties.

In order to be able to appreciate the skill and patience of the professional grower who yearly treats us to a feast of beauty at the great November Chrysanthemum shows, it is well to try growing a few of the tender greenhouse varieties for self educators, and even if they do not become winners they will brighten the sun room anyway. Get ready for them now by starting a compost heap. Using one-third good stable manure to two-thirds fresh sod and a generous sprinkling of raw bonemeal. Shovel it over occasionally so that it will become evenly mixed, and when well rotted will be an ideal soil for Chrysanthemums that are to be grown in pots. Select a few good varieties and let us try growing them together.

MRS. A. H. AUSTIN.

Good Roads, Flowers, Parks, Better Schools, Trees, Pure Water, Fresh Air, Sunshine and Work for Everybody--these things, to me, are Religion.—Robert Collyer.



GARDEN OF S. A. STEVENS, GREAT DIAMOND ISLAND, PORTLAND, MAINE.

This photograph taken late in the season, illustrating method of supporting the tall flower spikes with cord. Planted with Mr. Stevens' bulb planter illustrated in our advertising pages this month.

Clay vs. Sand in Rose Soil.

My roses did not bloom well two years ago; the buds blasted, the new growths were not as strong as they should have been, and this in spite of plenty of watering and preventive treatment for black spot and other diseases. My soil was a rich, sandy loam and from the way that the weeds flourished upon adjoining plots, it was apparent that I could not attribute the cause of my failure to an improper location. As I had only a few plants, mostly *Hybrid Teas* and *Maréchal Niels*, I decided to give them an entirely new soil so that I could determine whether or not it affected the quality of the bloom.

About that time I chanced to read an article in *The Garden Magazine* advising a clayey loam as a suitable soil for all Roses. I knew that the soil in which my Roses had been growing was deficient in clay, so hunting around in my garden I soon located the proper soil in a weed patch. This I cleared about the middle of January and scattered over it a small quantity of well rotted manure, after which the soil was pulverized to a depth of two feet, the manure being incorporated with it. The plants were then moved.

I had no trouble in transplanting the two-year old plants; the roots were taken up with a spadeful of soil and they hardly knew that they had been moved until the roots found the new soil, when they fairly jumped into active growth.

Last April the first blossom appeared, not the small half-opened blighted blossom of the previous spring, but a bud that formed a great brilliant, fragrant blossom. The size and color of all my Roses has been much better this past summer than ever before. Especially is this true of the *Maréchal Niels*; they have never bloomed so freely nor has their color ever been more intense. All of which I attribute to a clay soil.—BUFORD REID in *The Garden Magazine*.

We would call attention to the fact that some of our advertisers this month are, for introductory purposes, advertising some exceptionally low prices on some of the very best varieties by the dozen and by the hundred. It is wise to take advantage of it before the stock is all sold out. The collections advertised also are exceptionally good value at the prices quoted.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
PUBLISHED MONTHLY ON THE FIRST OF THE MONTH BY
MADISON COOPER, CALCIUM, N.Y.

Subscription Price:
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3 years for \$1.50.

OUR MOTTO:
Special favors to none, and a square deal to all.

Canadian and Foreign
Subscription Price
\$1.00 per year

Growers are invited to contribute articles or notes over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.

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Vol. IV.

February, 1917

No. 2

Proper Time for

Harvesting Gladiolus Corms.

The article by "G. C." on page 30 this month is a very interesting and vital one to Gladiolus growers and it is hoped that the suggestions made in this article will bring out further comments and the experience of other growers.

The time of digging necessarily depends on weather conditions, time of planting, size of the crop, etc. Usually cormels are planted first in the spring and are dug first in the fall. Many growers begin digging their cormel or bulblet grown stock in early September and try to get this out of the way before their general digging commences in October. It is a tedious and laborious job to dig this small stock and by beginning in September it avoids the disagreeable weather which is likely to be encountered later on. There is another reason why cormel grown stock should be dug early. The foliage or tops in September is usually quite strong and can be used for lifting the corms. Later in the fall it withers and is easily detached from the corms.

Those who practice planting in succession to get a long period of bloom, should, of course, figure on digging the latest

planted stock the last in the fall. We believe it is not good practice to dig corms immediately after blooming. The corms are not fully developed and matured at that time and cormels are comparatively few and immature.

Experienced growers have noticed that the stock which is dug last in the fall—say about November 1st, has more and larger cormels than the stock dug earlier. It seems that the cormels do not cease growing when the foliage is killed by frost. Cormels from very late dug stock, are not only larger but more mature and have greater vitality for germination when planted.

We have never experienced the root growth on new corms as mentioned by "G. C." This must be an unusual result caused by extraordinary weather conditions or unusual cultural conditions. Certainly any root growth from the new corms which must be lost, weakens them to that extent, although not necessarily a damage which may be readily apparent.

The suggestion of "G. C.," which has been made by other growers, to wait until the foliage shows ripening is not a good guide. Some varieties mature their foliage much earlier than others and some varieties retain green foliage until very severe frost. So far as we can see whether

the plant bears seed or not has little influence on the time at which the corm should be dug.

Practical considerations have more influence on the time of harvesting the Gladiolus corm crop than anything else. The little fellows are dug first because they are planted first and ripen first, and because the job is a difficult one. (By the way, an invention for digging cormel grown stock would find ready sale.) More mature corms are dug late as this work may be rushed and it is not so difficult in wet or cold weather. Generally speaking, the month of October is the month for digging Gladioli in the latitude of New York and New England. Some growers are still digging in November, but frozen ground may be encountered most any time after November 1st. September in average seasons is too early to begin digging the general crop as the corms are not sufficiently mature.

MADISON COOPER.

Price Variation for Gladiolus Corms.

The question of variation in prices made by different growers continually comes up. Correspondents write in and want to know why one grower asks twice as much for the same variety as another. We beg to explain again that this does not necessarily follow that the high priced man is trying to get more than the article is worth. His supply may be small and he values it accordingly, or perhaps the low priced man has a surplus stock and he is for this reason more anxious to sell. Furthermore, low prices sometimes mean inferior quality. There is nothing very fixed about this matter as a Gladiolus grower will readily find out for himself if he buys the corms from various sources. Not only is the price not very well fixed but the quality is even more variable.

Give the high priced man credit for good intentions until you have proven differently. His stock may be worth all that he asks for it as compared with the low priced man.

An Example of Helpfulness.

We are printing in another column an article on growing Peonies from seed, written by a man 88 years of age. Here is an example for some of our younger and more active flower lovers. When a man of this age can find time and has the disposition to write articles for publication to help other people, certainly younger men, who perhaps plead lack of time and pressure of other matters, can do something if they will. We have already called attention to the fact that those who have information and facts which will be helpful to other people and do not write them for publication are neglecting a positive duty to their fellow men. Just think this over and see what *you* can do for the benefit of others. Those who are a little timid about having their name attached to a published article may do as our friend of 88 years has done, simply use his initial letter. Helping the other fellow is the main idea.

One of our subscribers offers a suggestion about the use of a typewriter by Gladiolus growers. He says he is surprised to note the shabby appearance of the majority of their letters and that some of the largest growers write on common paper without letterhead, and that some of them use a lead pencil. He suggests that Gladiolus growers should provide themselves with a typewriter and send out creditable letters. We have already had this suggestion in the columns of THE MODERN GLADIOLUS GROWER, and certainly it should not need repeating.

Our subscriber has the further suggestion to offer that those who use typewriters should keep the type clean and not let it clog up. Certainly typewriting from a machine that is balking, out of order, and dirty is pretty nearly as bad as handwriting, sometimes worse. Those who are careless about such matters will perhaps plead lack of time, but really there is no excuse for not sending a good appearing letter to a stranger.

An Eminent Gladiolus Grower Passes to His Great Reward.

WITH the passing of Frank Smart Morton the Gladiolus industry loses one of its most valuable assets. Mr. Morton died at his home in Portland, Maine, on January 1, 1917. He had been confined to the house for a number of days and while his condition had been serious his immediate death was not expected. His death was due to pneumonia which was unusually severe because of a nervous breakdown from which he had been suffering for some time. He was, however, able to continue his duties as Assistant Business Manager of the *Portland Evening Express* up to within a short time of his death.

Mr. Morton was born June 9, 1860, at Winthrop, Maine. After graduating from High School in his native town he devoted his spare time to writing for publication, much of his material appearing in the *Portland Daily Press*. His work in this line was of a high order and attracted the attention of the publishers of the *Press* who induced him to locate in Portland.

On reaching Portland Mr. Morton entered the employ of the *Portland Daily Press* and undertook to learn the printers' trade, but after serving a time at the printers' case the confining work undermined his health and he was transferred to the counting room. The outdoor work in connection with collecting restored his health and from time to time he was given more responsible duties and finally became business manager, having full charge of the paper, and not only the mechanical departments, but the business department as well.

Mr. Morton was continuously in the employ of the *Portland Daily Press* for nearly 30 years, during which time he made many improvements and he con-

tinued with the paper until it took over the *Portland Daily Advertiser* when he continued as manager until it was absorbed by the *Portland Evening Express* in 1909. Mr. Morton was Assistant Business Manager of the *Portland Evening Express* to the time of his death.

As a student of nature, Mr. Morton was prominent in local circles and he was particularly interested in natural history and an active member of the Portland Society of Natural History, being Vice President of this organization at the time of his death. With the microscope he had reached a high point of efficiency, becoming expert on marine zoology. He had made a close study of birds and small animals and was a student of their life and habits.

But it was as a fancier of flowers that our readers chiefly knew Mr. Morton. Not only was he a very proficient judge of Gladioli, but he had accumulated a collection of several hundred of the most

meritorious varieties in commerce and had produced some unusual seedlings of his own hybridizing. None of these have as yet been placed on the market. Although only an amateur grower, few men were better posted on nomenclature and varieties than Mr. Morton. He was especially familiar with the French varieties. As one of the judges at the last flower show of the American Gladiolus Society, the work of Mr. Morton was most satisfactory. We believe that we are not exaggerating in saying that no single member of the American Gladiolus Society has done as much for its welfare as Mr. Morton. He had been on important committees and his name had been mentioned for president of the society.

Readers of THE MODERN GLADIOLUS GROWER are familiar with the writings of



THE LATE FRANK S. MORTON.

Mr. Morton on the Gladiolus. His writings were always concise, entertaining and helpful. The Editor feels the loss of Mr. Morton as a personal one as he had been a staunch and consistent friend in every possible way. From the very start he took a deep interest in the welfare of THE MODERN GLADIOLUS GROWER and has assisted it and its Editor in a most unselfish and efficient manner and for no other reason than natural goodness of heart, the accomplishing of useful work, and a disposition to assist a worthy cause.

Resolutions of respect and sympathy were adopted by the Maine Daily Newspaper Association and by the Portland Society of Natural History as well as by other organizations with which Mr. Morton was connected.

Mr. Morton is survived by one daughter, Margaret. Mrs. Morton died less than a year ago. The daughter has the heartfelt sympathy of Mr. Morton's associates and all who know her.

Peonies from Seed.

Peony seeds should not be allowed to become dry after ripening, but be planted at once in rich mellow soil. The seed bed should be mulched with light litter to prevent drying of the seed during winter, and also especially as protection from early spring frosts, as the plants begin to come through during the first warm days in spring, and then are almost as tender as young tomato plants. Under careful management seedlings should begin to bloom the third year from seed. Peony seeds that drop from blooming plants falling to the ground, protected by the foliage and litter come up freely the following spring.

Few of the finer Peonies produce seed. I have grown Peony *officinalis Rubra Plena* more than 75 years, and although the plants produce seed pods freely, I have never been able to find a single seed. This is the "piney" of our grandmothers' gardens, a native of Switzerland. Has been in cultivation in English and American gardens more than 100 years and still one of the best early flowering varieties. In bloom, in the central west about Decoration Day. *P. Karl Rosenfield*, one of the new candidates for favor, a large very dark red one, seeds freely.

Single peonies produce seeds more freely than double flowering sorts, and by some are considered more highly. The blooms stand out more boldly, and at least add variety. E.

Who Are Amateurs?

Editor Florists' Exchange:

Nathan A. Miller writes under this title in *The Exchange* of Dec. 23. His letter contains three outstanding points as follows:

First: An amateur should not sell his product. This point has already been covered so fully that it really does not need further explanation, but it has been demonstrated, and doubtless will be demonstrated again, that if floral societies make rules debarring exhibitors from the amateur class if they sell any of their product, or products, there will be so few entries as to make this class of no consequence. This was demonstrated at the last show of the American Gladiolus Society. There were 36 separate prizes offered in the "small amateur" class—those growing less than 1000 bulbs. There was just exactly one person entered and only for a few of the different prizes.

Second: Amateur athletes are not allowed to compete for cash. Athletics and flower growing are two different propositions and cannot be compared at all. This is easily understood when it is noted that a large portion of the prizes offered to amateurs in floriculture consists of cash, whereas no cash is allowed in any form or shape in connection with amateur athletics.

Third: The small amateur should be considered. He is certainly entitled to consideration, but just how to give him consideration is the problem. The only possible way it can be done, so far as the writer can figure out, is to make a class for a very limited number of blooms and not allow those who compete in this class to compete in any of the other classes. In other words, those who compete in the open, professional, gardener or advanced amateur classes or in the regular amateur class, should not be allowed to compete for the limited number of spikes, which are properly the field of the small amateur.

It may be suggested that expression of opinion on this subject should be made with a prize schedule in hand. Abstract suggestions, without applying them specifically to classification and prize list, are not essentially helpful.—MADISON COOPER in *Florists' Exchange*.

From reports received it seems that first size corms and possibly second size corms of the standard varieties will be sold out before planting season. It is probable that there will be a shortage this year.

WAYSIDE RAMBLINGS.

STORING GLADIOLUS CORMS.

TO THE EDITOR:—

I notice in THE MODERN GLADIOLUS GROWER just received, that a writer in *Wallace's Farmer* advises storing Gladiolus bulbs in barrels. I would strongly advise not to do this as they are extremely likely to heat, sweat and grow if stored in bulk in any deep receptacle. The ordinary California half-bushel box or an apple box cut in two, is about deep enough and somewhat open, which is desirable. These boxes can be set a little distance apart lengthwise and the next tier set so as to bridge over the spaces, leaving a similar space over the middle of the first tier. This not only gives air but also gives a chance to reach into each and every box without moving the one above. Berry crates, though deeper, will do very well, owing to their open construction. For storing quantities I use a lath bottom crate about four inches wide on one side and two on the other, five inches high at the ends. This gives good space between when piled and I can reach into the crates. A board four inches wide crosswise in the middle gives stiffness to the bottom.

GEO. S. WOODRUFF.

DATE OF BLOOMING.

TO THE EDITOR:—

The article under the above caption, signed "G. C." which appeared in the December issue, is very interesting, but would have been of greater value had the writer given us the number of days that expired between the date of planting and the date of blossoming, of the varieties cited. Will he not publish such a list?

All growers will agree with Mr. D'ombrian, quoted by "G. C.," that it is much better to defer planting if the ground is sodden—he might have said also, if the ground is cold. I do not, however, understand Mr. D'ombrian's statement that it does not "make much difference as to their time of flowering whether you plant early or late." He, of course, cannot mean just what his words imply, and I am asking myself, what does he mean?

It is quite true that under the average conditions the bulbs planted on May 5th, for an example, will bloom about the same date as those which were planted on April 15th. That is a mere coincidence, however, and should not be accepted as evidence that the date of blooming depends upon anything inherent in

the bulbs, for if you defer planting the late group until June 5th, the blossoms will appear correspondingly late.

The size of the bulb influences the time of blooming somewhat, for, as a rule, the first size bulbs will bloom earlier than will those of the smaller sizes. The principal influences, I think, in determining the date of blooming, is the condition of the soil at the time the bulbs are planted, and secondary to this is the weather conditions. If the bulbs are put into soil that is cold their growth will be retarded and they will receive a check from which it will take them some time to recover, though the blossoms will be hastened if during their growth the plants are favored with an abundance of strong sunshine and an abundance of moisture.

To put the matter in other words: The bulbs planted late in the season are sure to bloom in a fewer number of days by having a warm bed to lie in at the start and will be helped along by suitable weather conditions.

Another factor which should have recognition here is the condition of the bulbs at the time they are planted. If they are allowed to become very dry—to lose all their moisture—they will not germinate quickly, and will mature slowly, and if extremely shrivelled they will never germinate.

MONTAGUE CHAMBERLAIN.

NATIONAL FLOWER—ABOUT THE IRIS.

I have read with interest what Mr. Kunderd has to say in your January issue about the iris. He gives it no more than its due and I believe every word he says of its beauty and its coming popularity.

As for a National Flower, however, I would not even consider it. In the first place while it is found "wild" or native in this country I do not believe it is as well known nor as widely distributed as the Goldenrod, or even the Wild Rose, or a number of other flowers that I might name.

Possibly I have the wrong view of what is most appropriate for a national flower but I feel very strongly that it should be one that flourishes in the "wild" state and is most universally distributed throughout the country; one that is vigorous, hardy, beautiful and that makes the most of all conditions and circumstances and needs no petting or artificial surroundings to set forth its beauty.

Let's develop the Iris; let's make it as near perfect and as universally admired as the Gladiolus; but for the National Flow-

er, can we not retain a really "wildflower" such as every one may know in its native surroundings? GEO. A. WHITNEY.

American Use of Cut Flowers.

We do not see many advertisements of flowers in the daily papers or magazines at this time, although we do see plenty of advertisements calling attention to the merits of certain brands of apples and oranges; while chocolates and other things as gifts for this Christmas season are also liberally advertised. There is no superabundance of flowers or plants this year, which would account for the lack of advertising, as all are expected to be sold in the ordinary course.

Flowers have become a prominent feature in the homes of all the well-to-do, and in the first-class hotels. This fact has been remarked many times by writers visiting this country from abroad. An English journalist, Stanley Brooks, discussing Washington, D. C., in the *New York Times* last Sunday, laid special stress on the prodigality of rare flowers that are used on the dining tables of Washington society and in the houses of the rich people of the capitol. That a writer, looking through a stranger's eyes, should make special mention of this fact in a discussion of the outstanding features of Washington and of the life of that city, struck us as being very noteworthy.

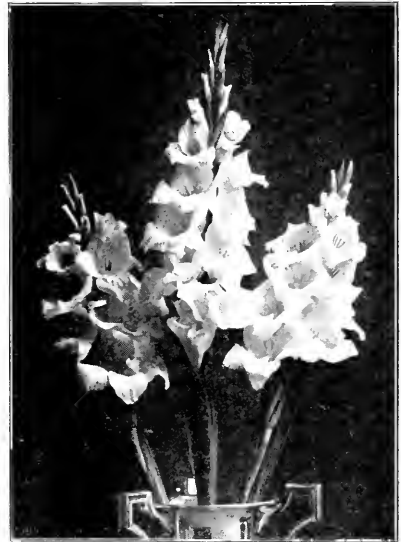
Writing up the life of the late Charles Boldt, the famous hotel man who died in New York very recently, one writer mentioned that Mr. Boldt was the first to use flowers on a large scale in hotel decorations. Certainly floral decorations in the halls and rooms of hotels, and exterior decorations of flowering or evergreen plants, are a part of the scheme of things. The floral decorating extends also to our railroad trains, automobiles and steamships, not forgetting the part that flowers play in personal adornment, of the women folks particularly.—*Florists' Exchange*.

American Gladiolus Society.

The variety *Prosperity* is offered for registration by Arthur Cowee, Berlin, N.Y. If no objections are filed with the committee requiring the withdrawal of the name, the registration will become complete January 30, 1917. The following is a description:

The plant is tall, most striking, and attractive. Its massive proportions, broad, heavy foliage of a rich green, erect and vigorous habit of growth, give evidence of a strong constitution. Flowers are

large. Color is a bright rose shading to madder-lake, except the last segment, which has a chamois-yellow base. Anthers violet, styles white. Unsurpassed as a keeper. A. C. BEAL, Chairman.



Gladiolus—Europa.

Grown in 1916 by A. M. Snyder, Bellefontaine, Ohio, from $\frac{3}{4}$ " corms.

Europa is quite notional as to its environment and many growers claim they can do nothing with it and have discarded it for this reason. That it is subject to disease, there is no question, but its extreme purity of color makes it very desirable where it can be successfully grown. The editor has made the statement that if it were necessary to plant one hundred corms of *Europa* to get one good bloom, he would still be willing to do it.

Mr. Snyder reports with reference to *Europa* as follows:

"I tested it with three other white ones, *Glory of Holland*, *Lily Lehmann* and *Rochester White*, and it far surpassed either of them in growth of plant and spike of bloom. With me it is a strong grower and the best white I have ever tried. I had *Rochester White* in 1915 and it then showed a decided weakness and this year it did not show a single bloom with same care of the others."

Jelle Roos promises to have *Daisy Rand* in color in the March issue.

The Dahlia.

BY JOE COLEMAN.

[Continued from January issue, page 10.]

SOME seasons are more favorable for success in growing and flowering Dahlias than others. The past season (1916) was particularly bad due to the extreme heat and dry conditions. But it would take several disastrous seasons to lessen the ardor of the Dahlia enthusiast; and the many are now planning and hoping for a gorgeous show that only the "King of Autumn" can give.

Would that it could be impressed upon the beginner, or, for that matter, the dear old lady who has had her "old-fashioned show Dahlias" for the past fifty years, that this plant is a cool weather flower and should not be planted early. With the thrills and inspiration of the few first warm days, out come the Dahlia clumps and in the ground they go, oftentimes a whole clump of a dozen tubers planted in one place. Throughout the middle states May 10-20, or even June 1, is ample time for the plants to make their quick growth and flower by the first of September. If planted early the Dahlia has a long period of growth, the wood becomes hard, and only inferior blooms, if any, are the result. As the Dahlia must bloom on soft wood, and should the mistake have been made of early planting, about the first of July cut away or prune severely, leaving about a third of the plant up from the ground. By so doing new, soft growth starts that in most cases will give good flowers at the proper time.

Only plant a single tuber in a place; this rule should be strictly adhered to, and if more than one eye starts from the tuber, after the sprouts are several inches high cut away all but the strongest. Decidedly one of the best methods of growing the choicest blooms is using green plants. To our mind a plant is better than a tuber, provided when the slip is taken that a small portion of the base meat of the tuber is attached to the sprout. Otherwise if a slip is taken at a joint and not at the base, the plant would succeed equally well, but many times only a fibrous growth would result and no tuber formation to be kept over for another season's stock.

A sunny location is essential. If one is fortunate enough to have a piece of high ground that is not subject to the early frosts, so much the better. The remark is often heard that Dahlias succeed

best on poor soil, but such an assertion is erroneous. It is true that the Dahlia, so far as soil conditions are concerned, is less particular than many other plants. If the soil should be too rich the plant makes a rank growth and few flowers are the result. The average garden soil of good fertility is about proper. While not absolutely necessary a grower is repaid in larger and better blooms by feeding the plants at blooming time liquid manure once a week. It is our purpose to give just the A B C of Dahlia culture, and not go into the details of the processes of the professional exhibitor who feeds his plants bone flour, expensive fertilizers, &c., for the production of mammoth exhibition blooms. The writer has had excellent results by incorporating into the soil where each plant or tuber is to be set a shovelful of coal ashes. The Dahlia seems to take kindly to the moisture retaining qualities of the ashes.

[To be continued.]

American Dahlia Society.

The December Bulletin of the Society, Vol. I, No. 5, published for the Society by J. Harrison Dick, Sec'y, at 1426 Seventy-third street, Brooklyn, N.Y., has just been received. It is a bright, interesting Bulletin. It gives, in its compact eight pages, an account of the second annual exhibition of the society, a copy of the society's constitution and by-laws, society news, cultural notes and other information of interest to Dahlia growers. There is also shown a facsimile of the new attractively engraved certificate of merit, awarded only to the best seedling novelties of the year. The actual size of the certificate is 13 x 10½ inches, and in its border are illustrated the various types of Dahlias.

The variety *Willy Wigman* which was criticised in the December issue, is reported by W. E. Fryer, Mantorville, Minn., as standing the heat of the summer of 1916 as well as any white variety. He also reports the foliage healthy and the bulbs large and clean when dug.

Don't forget to plant some seed this year. It can be had from most of our advertisers.

Time for Digging Gladioli.

"After the flowering season they begin to dry off, and towards the end of October or beginning of November many of them will be fit to take up."—Rev. H. H. D'Ombrian, 25th Aug. 1891.

"Bulbs should be dug before the plants are too ripe. In the fall before hard frosts, dig the bulbs and cut off the tops."—A. E. Kunderd.

"All bulbs should be lifted on the approach of autumn frosts. It is not necessary to wait till the foliage dies down."—Mrs. G. H. Atkinson, 1914.

"Dig the bulbs in October, and immediately cut off the stalks a half inch from the bulb."—L. Merton Gage, 1916.

"In November, before the approach of frost, Gladioli should be lifted."—Barr & Sons, 1916.

"The time of lifting the corms should be carefully attended to, as it is a point of great importance in preventing their decay. No harm will arise from early lifting, even if it is done as soon as the spikes of bloom are cut."—J. Kelway, 9th September, 1890.

On September 23rd, I proceeded to act on the last mentioned advice. The ground was dry and the corms came up quite clean and very plump; but some of the new corms had considerable new root growth. I do not remember noticing this in previous years, even when the corms have been left in the ground until a much later date. I have, as will be gathered from the above quotations, looked up a good many authorities, but can find no mention of roots being thrown out by the new corm.

The Rev. D'Ombrian goes on to say: "As I do not care to save seed, I cut off the flower stems as soon as they have bloomed, take away the stakes, and then, as they show symptoms of ripening, take them up."

Some of the corms I lifted had borne seed, but were still gross and green, and it was chiefly on account of the dry weather that I started lifting the crop. Now the question arises: "What effect, if any, will the premature rooting have on next year's flowers?"

This year has been peculiar in weather conditions, so far as my recollection goes, in relation to the Gladiolus. The corms were planted in dry weather, and growth was slow over a very long period, and the foliage, what there was, had more the appearance of autumn than spring. Watering had to be taken in hand, which was followed, very fortunately, by warm showers which soon put a new appearance on the plants, and they grew and bloomed, with one or two exceptions, profusely. So far as appearance goes the foliage is still gross and green, but evidently the time has arrived when all of them should be taken out of the ground.

It would appear that the appearance of

the foliage is not always a sure guide for lifting, and it would be better to leave a spike or two to seed and lift as soon after the seed is ripe as is convenient. G. C.

The Cheering Effect of Flowers.

Physicians at the Battle Creek Sanitarium, Michigan, prescribe flowers for their patients just the same as they would order a massage or an application of electricity. The influence of flowers in lightening sorrow and suffering has always been recognized, but their employment as an actual remedy is recent.

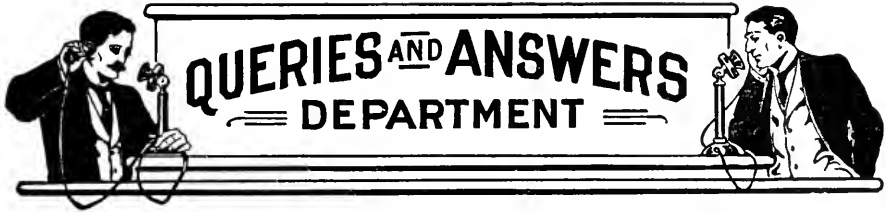
When a patient is feeling depressed, the physician orders a vase of flowers or a blooming plant, and the effect is pronounced. When a person is confined to his bed for a long time it often diverts his mind to have a plant near the bed which he can watch as the buds grow into flowers.

A rich man who had had an operation at the Sanitarium, and was preparing to go home, asked the florist of the institution if he might take with him a little Asparagus plant which was in his room. "Of course, you're welcome to it," was the answer, "but it will be a bother to carry it so far. You can buy one like it at home for a few cents."

"It isn't a question of money," said the patient. "I want to have it properly packed and shipped by express. I have watched that plant for eight long weeks when I lay in bed and I have come to love it." It is doubtful whether any other institution in the country pursues such a liberal and intelligent policy in regard to flowers as the Battle Creek Sanitarium, and a similar policy on the part of hotels and sanitariums generally would be not only a boon to the florist trade but to humanity as well.—*Florists' Exchange.*

Gladiolus.

If you wish a flower that is sure to satisfy, plant the Gladiolus. Last summer we had drouth, and almost cloudbursts, long rainy seasons when other plants just succumbed, but the glorious Gladioli braved it through and at the end of August were just one gorgeous plot of color, the plants standing almost four feet high in some instances. When I try to describe the immense blossoms, so rich in their orchid coloring, I have to admit that no words can rightly convey their beauty. One just has to grow them to know.—MRS. E. C. TORREY, in *Parks Floral Magazine.*



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Growing Gladioli from Bulbets.

TO THE EDITOR:—

Is it any secret how to plant and raise bulbets? This season I had quite a few and gave them to a friend. The little bulbets did not do well. In fact, they all rotted in the ground. I am inclined to try my luck next spring on a few. I believe very early planting advisable, about the time you put out onion sets. We new beginners have it all to learn. W. L. T.

Answer:—There is a vast difference in the vitality of cormels of different varieties and where some varieties will stand almost any treatment and pretty nearly all of them germinate, others are difficult to make grow in reasonable percentage even with the most careful handling.

Failure to germinate is more often owing to the fact that the cormels are allowed to dry out than to any other one reason. After digging, if cormels are properly aired and exposed to the sun, they may be packed in reasonably dry sand or soil in tubs, boxes or barrels and kept in good condition throughout the winter in an ordinary cellar. They should be examined from time to time to see that they are not molding.

Your suggestion that the cormels rotted in the ground is probably not correct unless they were already rotted before planting. Instead of rotting as a general thing the little fellows remain dormant and are just as likely to grow the second year. Some people claim they are more likely to grow the second year.

In THE MODERN GLADIOLUS GROWER you will find information on this subject as follows:

Page	62,	April,	1914,	issue.
	68,	May,	"	"
	128,	Aug.,	"	"
	180,	Dec.,	"	"
	50,	April,	1915,	"
	94,	July,	"	"
	95,	July,	"	"
	29,	Feb.,	1916,	"
	156,	Nov.,	"	"

Very early planting is advisable, not only to get the advantage of a thorough soaking during the spring rains, but also a longer period of growth with resulting greater increase. Just as soon as the

frost is out of the ground cormels may be planted to good advantage.

As you have a complete file of THE MODERN GLADIOLUS GROWER you can easily refer to the above mentioned numbers. The storage of cormels is quite a problem and all growers complain of poor germination, especially some varieties.

Bulbs in Cold Storage.

TO THE EDITOR:—

Will you be good enough to give us some information as to handling in storage the various bulbs such as Gladioli, Hyacinths, Tulips, Cannas, etc.? We have quite a lot of each of these various bulbs to put into cold storage and any information you may be able to give us will be greatly appreciated. S. I. Co.

Answer:—Lily of the Valley are commonly carried at 26 to 28°F. In other words, they are carried in a frozen state. Such bulbs as Gladioli, Hyacinths, Tulips and Cannas should be stored at a somewhat higher temperature, and in case of Gladioli especially, we should recommend a temperature not lower than 34 or 35°F. Any of these products should not be stored in too large a bulk as they are inclined to collect moisture, causing mold and decay. Some sort of racks or trays are desirable.—From *Cold*, Calcium, N.Y.

Gladioli Blighting.

Please let me know what is the matter with this Gladiolus foliage, a sample of which is enclosed. A few acres of Gladioli got spotted in this manner, and then turned yellow and died away. What is the cause of this trouble, and what is its best remedy? A. A. R., N.Y.

Answer:—It would appear that the trouble with the Gladioli is attributable to some one or more causes: Firstly, the bulbs themselves which were planted may have been diseased; secondly, they may have suffered from a drought following very wet weather; thirdly, they may have been attacked with some fungus disease. In the last named case they might have been helped if taken in time by spraying with Bordeaux mixture.—*Florists' Exchange*.

Price Lists, Catalogues, Etc.

Vaughan's Seed Store, Chicago and New York. Spring 1917 price list of Gladioli, illustrated. A very complete four page list with prices, singly, by the dozen and by the hundred.

Richard Diener Co., Kentfield, Calif., 1917 catalogue of Gladioli. Sixteen pages and cover, illustrated with photographs. The Diener productions are listed, described and priced. Also, Carnations, Pansies and Petunias.

G. D. Black, Albert Lea, Minn., 1917 wholesale price list of Gladiolus corms, four pages, listing the standard varieties and Mr. Black's specialties. Prices on wholesale quantities, also bulblets.

Sunnyside Gladiolus Gardens, L. Merton Gage, Prop., Natick, Mass. Retail price list for 1917, 8 pages with cover, containing the usual choice selection grown by Mr. Gage.

W. E. Fryer, Mantorville, Minn. List of change in prices and additions to Mr. Fryer's catalogue.

C. Keur & Sons, Hillegom, Holland. Colored calendar with illustration of Queen Wilhelmina of Holland, with very complete list of Gladiolus corms.

V. Lemoine & Son, Nancy, France. Catalogue printed in English of greenhouse plants, hardy shrubs, etc. The catalogue includes the Lemoine varieties of Gladioli.

Riverbank Gardens, Raymond W. Swett, Prop., Saxonville, Mass. Retail price list of sixteen pages and cover. Mostly Gladioli, but also listing Montbretias.

C. W. Brown & Son, Ashland, Mass. Retail catalogue and price list for 1917 of Gladiolus corms. Some useful information and cultural directions are given. Eight pages and cover.

Munsell & Harvey, Ashtabula, Ohio. Wholesale price list of Gladiolus corms in first and second sizes.

Firma P. Vos, Mz., Sassenheim, Holland. Catalogue for fall of 1916 and spring of 1917. In addition to the standard American varieties, the new Vos specialties are listed. Twenty-four pages and cover, illustrated.

John Lewis Childs, Flowerfield, L. I., N. Y. Wholesale trade catalogue, 24 pages, listing in addition to the usual Childs varieties of Gladioli and the standard sorts, miscellaneous bulbs, Cannas, hardy perennials and Iris.

P. Hopman & Sons, Hillegom, Holland. List of Gladioli. Illustrated and consisting of 8 pages and cover.

Geo. J. Joerg, New Hyde Park, L. I., N. Y., in his wholesale list for 1916-1917 quotes on the standard varieties and mixtures by the hundred and thousand and some new special varieties by the dozen only. Gladiolus seed, hand pollinated, is also listed.

Westerbeek & Klyn, Sassenheim, Holland. List of Gladioli, Dahlias, Iris, Peonies, etc.; 36 pages with index and cover.

K. Velthuys, Hillegom, Holland. Wholesale trade list of Dutch bulbs and plants. Also listing Gladioli, consisting of 46 pages and cover, well illustrated and classified.

Austin-Coleman Co., Wayland, Ohio. Wholesale list of standard sorts and with good descriptions of the Austin productions.

H. E. Meader, Dover, N. H. Wholesale price list of planting stock of best florists' mixtures for the trade only.

K. Velthuys, of Hillegom, Holland, have kindly sent us a set of colored photographs of Gladioli and Darwin tulips. These are on large sheets about 8 1/2 x 15 in. and they illustrate some of the more popular varieties like *America*, *Panama*, *Niagara* and *Baron Hulot*, as well as some of the best new ones. The New York representative of this firm will quote prices on same.

G. D. Black, Albert Lea, Minn. Special catalogue of Gladioli divided into classes and mixtures, with detailed cultural suggestions, 16 pages and cover.

E. E. Stewart, Brooklyn, Mich. Wholesale price list of Gladioli, about 100 different varieties priced by the hundred and by the thousand; also in color sections and in mixtures.

The Most Popular Dahlias.

Last year the *Florists' Exchange* took a vote from thirty of the leading growers and dahlia experts to secure their opinion on favorite varieties and the list which they secured is as follows:

Votes—14, *Geisha*; 12, *Kalif*; 11, *Hortulanus Vict*; 10, *Countess of Lonsdale*; 9, *Souvenir de Gustav Douon*, and *Wodan*; 8, *Delice*; 7, *Marguerite Duchon*, *Perle de Lyon*, *Rev. T. W. Jamieson*, and *W. W. Rawson*; 6, *A. D. Livoni*, *Mrs. Roosevelt*, and *Wolfgang von Goethe*; 5, *F. W. Fcl. loves*, *Golden Gate*, *John Riding*, *Le Grand Manitou*, and *Rene Cayeux*; 4, *Etendard de Lyon*, *Golden West*, *Lavine*, *Souvenir de Chabanne*, and *Thuringia*; 3, *Arabella*, *Dorothy Peacock*, *Dreer's White*, *D. M. Moore*, *Jack Rose*, *Jeanne Charnel*, *Caleb Powers*, *Master Carl*, *Minnie McCullough*, and *Sylvia*; 2, *Aurora Auguste Nonin*, *Brocclan*, *Chas. Clayton*, *Duchess of Brunswick*, *Dr. Peary*, *Mondscheibe*, *Mrs. Nath. Stocombe*, *Niebelunge-nort*, *Miss Wilholt*, *Mrs. Kentwell*, *Prof. Mansfield*, *Queen Esther*, *Robt. Broomfield*, *T. G. Baker*, *Walkure*, *Hampton Court*, *Rheinhoug*, and *Yelow Colosse*.

Those searching for a Gladiolus of distinctive color will be interested in *Mrs. Wall* which Mr. Chase in our advertising columns describes as a brilliant wine color. Some call it a dark American Beauty rose color. Anyway *Mrs. Wall* never fails to attract attention.

Our advertisers offer a wealth of price lists and catalogues which Gladiolus growers, even the small amateurs, should not overlook. A careful perusal of the descriptive matter, illustrations and information which is contained therein is a liberal floral education in itself.

Gladiolus America for Forcing.

America is still one of the most popular and best Gladioli we have today. There are others coming along which promise to be so far ahead of America as this sort proved to be over older sorts and some of them we noticed at the San Francisco Convention, but for the present, America is still the main standby, and can be bought at a low figure. We all know that there is but little in growing Gladioli for summer cutting. Too many are in it. As long as you just plant enough for your own use it is all right, but to grow them for the wholesale market isn't always satisfactory. It would seem that the average florist, instead of finding fault with the Gladiolus market during August and September, when every yard is full of them, would try and get his Gladioli in at a time when there is not only a demand for them but a limited supply, by planting bulbs from now on, indoors, up to next March. Flowers can be had from March until the time the first flowers open out of doors. This is not only a very simple matter but can be made to pay well. The retail grower has always stock on hand ready to leave the benches, or crops which didn't turn out as well as expected, and which have to be replaced. Why not use the space, at least some of it, for Gladioli? Get a good supply of bulbs now and keep on planting them. For the small grower I would suggest putting the bulbs into 4 in. pots and plant out later; this is better than having the bulbs, and later on the small plants, occupying valuable bench space for many weeks. The plants can remain in the pots until a foot high, and after that be planted out either between other crops or by themselves on a bench. For a succession of flowers plant a few bulbs every two weeks. It is nothing unusual to obtain \$1.50 per doz., even more, for extra good America Gladioli during the early spring months. The bulbs cost you about 1½c. each, and if handled right, 90 per cent. will flower. What could pay better in a Carnation house temperature? —FRITZ BAHR in *Florists' Exchange*.

I want to add my appreciation to the list of those who have told you what a fine magazine you have produced for the "Twentieth Century Flower." I have been in the business as one of the largest growers in this state, but since 1915 have sold out. Whilst in the business I kept posted on all conditions through the trade magazines, but your magazine had them all beaten in every way and I want you to know that your efforts have been noticed even in Wisconsin.

E. J. BROWN.

CLASSIFIED ADVERTISING.

Growers having surplus stock for sale will find this department effective in disposing of it. Five lines (about forty words) \$1.00 per insertion. Additional lines 15c. each.

GLADIOLUS BULBS FOR SALE—Good, clean young stock.—Finest varieties: Mrs. Pendleton, Grace Henry, Margaret, Schwaben, Peace, War, Princes, and many others. Also Cannas, Dahlias, Aster Plants, Cal-Privet and Grape Vines. Send for price list.

F. O. GODOWN, Flemington, N. J.

PUGET SOUND grown Dahlias, Peonies, Gladioli, Roses and Perennial Plants are the best in the land, owing to the ideal climatic and soil conditions. A genial, moist temperate climate makes them thrive and bloom here as nowhere. A trial order will convince you of this fact. Write for catalog. THE PUDDOR FARMS, Puyallup, Wash.

BULBS—Hyacinths, Tulips, (early and late), Narcissi, Daffodils, Paeonies, Gladioli, Also Spiraea and hardy plants. New list now ready. Write us today for your contracts for fall delivery. Van-til Hartman, Bulb Growers, Hillegom, Holland. Care P. C. Kuyper, 10 Broadway, New York City.

"That Modest Price List"—

For your address on a Postal.

F. M. HINE, Waverly, N. Y.

WANTED—200,000 Gladiolus Bulbs. These must be of first class mixture and of a size approximately 1 inch diameter. No objection to a moderate percentage of bulbs as small as ¾ in. Explain fully what varieties and colors the mixture is composed of and send samples and quote prices to HENRY FIELD SEED CO., Shenandoah, Ia.

SPECIAL BARGAIN—100 plump, sure-flowering Gladiolus Bulbs, mixed varieties and colors, for only \$1.25; 50 for 75c. Sample dozen, post-paid far as fifth zone, 25c. A surplus enables me to make these bargain prices. HOWARD GILLET, Lebanon Springs, N. Y.

TO INTRODUCE in your vicinity my fifty choice, named Gladioli, such as Panama, Pendleton, Niagara, Dawn, Peace, War, Pink Perfection, etc., I am offering unusually low prices. Send for descriptive price list. T. H. FULLER, Grower, 649 Marshall St., Battle Creek, Mich.

"THE AMERICAN BOTANIST"

Is published for all who are interested in the curious facts about our native wildflowers.

\$1.25 A YEAR. SAMPLE FREE.

Willard N. Clute & Co., Joliet, Ill.

deGroat & Stewart

Growers of Choice Gladioli

We specialize in the choice American and French varieties. Catalogue on request.

Bath, N. Y.

If you are a professional, commercial, or amateur grower, you will find the columns of

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brimful of helpful knowledge on plant culture—based on scientific, practical experiences—not on theoretical conclusions.

In addition to its contributed articles by well known authorities on horticultural subjects, digests of the leading topics appearing in American and European horticultural journals are regularly published in the Chronicle.

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GLADIOLI. PEONIES.

Dutch Bulbs. French Bulbs.
For 1917 Delivery.

C. J. Speelman & Sons
Sassenheim, Holland

Lagarde & Speelman
Ollioules. Var. France

SEND FOR PRICES TO OUR BRANCH OFFICE

P. O. Box 124, Hoboken, N. J.

We Grow Gladiolus Bulbs.

Send us your address for our
wholesale price list.

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GLADIOLI
Lemoinei and Nanceianus

Catalogue, printed in English, on application.

GLADIOLI

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WHOLESALE OR RETAIL?

John Lewis Childs, Inc.
Flowerfield L. I.

Vaughan's Specials in Gladioli



Margaret Beautiful Carmine with white throat.
Per doz., \$1.30; per 100, \$9

Primulinus "Sunbeam" The best and most distinct of all the Primulinus Type.
Per doz., \$2; per 100, \$15

Chicago White The best white for forcing.
Per doz., 35c.; per 100, \$2.25

REMEMBER we can supply strictly first size bulbs for counter trade and, where wanted, medium sized bulbs for mail trade on the above and all other Gladioli.

Write for our 1917 Catalog (out this month)—some Grand Novelties in **Gladioli and Cannas**.

Vaughan's Seed Store

CHICAGO, 31-33 W. Randolph St. NEW YORK, 43 Barclay St.

WILLIS E. FRYER

Hardy Plant and Gladiolus Specialist.

PHLOX OF MY OWN PRODUCTION:

AMELIA, crimson center fading to nearly white on outside of petals. ANNA, large white with red eye. CURIOSITY, in one dozen plants there are no two just alike. MRS. MELLINGER, rosy red, the best drouth resister in my collection. MRS. W. E. FRYER, one of the best white phlox that I have ever tested. MRS. K. ANDRIST, the nearest approach to blue that I have ever seen. REV. N. E. SPICER, the ideal pink. Many who have seen it in bloom pronounce it one of the best pink phlox that they have ever seen.

Strong plants of the above 30c. each.

GLADIOLI. Words of praise for the Gladiolus Mrs. W. E. Fryer:

Los Angeles, Calif.

Dear Mr. Fryer:—The bulbs of the gladiolus, Mrs. W. E. Fryer, about which you wrote me, were a surprise to me when in bloom. I think it one of the finest varieties yet produced in the gladiolus line. Yours very truly, W. J. Colclough.

Prices—No. 1, \$1.50 per doz.; No. 2, \$1.25 per doz.; No. 3, \$1.00 per doz.

KATHRYN FRYER, dark velvety maroon. The darkest that I have ever seen, \$1.00 each. MANTORVILLE, a yellow ruffled gladiolus. Some of the flowers are pure yellow while others are tinted pink, 25c. each. Gladiolus bulbs sent prepaid.

DELPHINIUM—My hybrids; hardly two alike. \$1.50 per doz. Strong plants, \$2.50 per doz.

SIBERIAN IRIS—GRANDIS, violet; reticulated white. 20c. ea., \$2.00 per doz. LADY GODIVA, bluish-white, flushed rose. One of the earliest; distinct. 25c. ea., \$2.50 per doz. SUPERBA, large, violet-blue; handsome foliage reaching almost to the flowers. 20c. ea., \$2.00 per doz. SNOW QUEEN, large ivory-white flowers. Extra. 20c. ea., \$2.00 per doz.

BEARDLESS IRIS—LORD WOLSELEY. One of the best. 25c. ea. SEEDLING BEARDLESS, \$1.00 per doz. All Iris are strong plants.

BOTH WHOLESALE AND RETAIL—WRITE FOR CATALOG.

Mantorville - - - - Minn.

WOODRUFF'S GLADIOLI

Hardly need introduction to most of you. They took first premium at the great Iowa State Fair and "Independence" Gladioli have taken first and second premiums and many specials every year since 1907. Satisfied customers all over the country testify to their excellence and fair price. Here are some offers:—

One each for 50c.—

America, Mrs. Francis King, Burrell, Princeps, Scarsdale, Velvet King, Queenly, Peace, Pink Perfection, Glory of Holland, Annie Wigman.

One each for \$1.00—

Golden King, Baron Hulot, Eldorado, Independence, Liebesfeuer, Halley, Loveliness, Niagara, Mrs. Beecher, Mrs. Pendleton, Lily Lehman, Schwaben, Pink Beauty, Princepine, Queen Wilhelmina, Willy Wigman; two each Primulinus Hybrids and Blue Seedlings.

These will be all good flowering size and postpaid, each sort labeled.

One hundred Oakwood Mixture, finest sorts for \$1.00 postpaid except in 6th and 7th Zones, for which add 20c. and 25c.

Send for catalogue now in preparation. It will interest you.

Geo. S. Woodruff, Independence, Iowa

GIANT GLADIOLUS

You have all often read of Giant Gladiolus with flowers 7 inches, and more, across and spikes from 5 to 8 feet tall.

While not all varieties can be grown to very great size, it is nevertheless surprising to what extent many kinds can be developed by following certain special forcing cultural methods. In our 1917 catalog we have given special cultural instructions, such as are not often available to the general public, and which, if carefully followed, will give surprising results.

We will gladly send you a free copy of our catalog for a postal card request, and we don't want you to feel in the least obligated on that account to give us any order whatever.

Address

A. E. Kunderd

Goshen, Ind, U. S. A.



"CRINKLES"
"KUNDERDI" TYPE

I WANT YOUR NAME FOR MY MAILING LIST FOR THEN
YOU WILL WANT

CEDAR ACRES GLADIOLI

"Bulbs that Bloom"

SEND FOR BEAUTIFUL ILLUSTRATED BOOKLET, DESCRIBING MANY VARIETIES
AND GIVING THE REAL TRUTH ABOUT EACH.

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CEDAR ACRES

Box K

WENHAM, MASS.

Gladiolus---Crystal White

The best white seedling to date for florists' use. A variety which everybody can grow. Good, healthy, vigorous and prolific.

Price for 1st size bulbs 25c. each, \$2.50 per dozen and \$15 per hundred.

Give it a trial:

Herman H. Baer

New Hyde Park, L. I., - - N.Y.

Wisconsin Grown Gladiolus Bulbs Better Than Ever.

Good mixture, named varieties, 35c. doz.; per 100, \$2.00 postpaid.

50c. Doz., \$2.50 per 100—

AMERICA, HALLEY, MRS. F. KING,
MINNESOTA, BARON HULOT.

\$1.00 Doz., \$5.00 per 100—

WAR, PEACE, NIAGARA, GOLDEN KING.

Dozen, postpaid. Per 100, express collect.

Lincoln Gardens, Eau Claire, Wis.

GLADIOLI-Named Sorts

	<i>Per doz.</i>	<i>Per 100</i>		<i>Per doz.</i>	<i>Per 100</i>
	<i>post paid</i>	<i>f.o.b. here</i>		<i>post paid</i>	<i>f.o.b. here</i>
America, soft pink	\$.50	\$1.50	Loveliness, cream apricot . . .	\$1.00	\$5.00
Augusta, white sh'd heliotrope . . .	.50	1.50	Mrs. F. Pendleton, Jr.	1.50	7.00
Baron Hulot, dark violet .....	.50	1.50	Panama, deep pink .....	.75	5.00
Brenchleyensis, verm'l scarlet . . .	.50	1.50	Peace, white, red blotch	1.00	5.00
Chicago, white early .....	.60	2.00	Pink Perfection, fine pink	1.00	6.00
Empress of India, dark maroon .....	.75	2.50	Rochester White, pure white . . .	1.00	6.00
Europa, snow white	1.00	5.00	Schwaben, pale yellow	1.00	6.00
Glory of Holland, white .....	.75	5.00	Brunswick Mixture .....	.40	1.00
Halley, large salmon .....	.50	1.50	Groffs Hybrid Mixture .....	.50	1.50
Lily Lehman, white rosy tinge . . .	.75	5.00			

At Dozen price, POST PAID. At Hundred price, F. O. B. HERE. Twenty-five (25) Bulbs of a kind at the hundred rate where not less than 100 bulbs are ordered 6 Bulbs at dozen rate.

SPECIAL OFFER—To introduce my Gladioli I will send one each of the 17 named varieties as above and 3 Groffs Hybrids, 20 bulbs in all, blooming size, the lot for only \$1.00, post paid.

SWEET PEA SEED—Very Choice mixtures

Winter Orchid, mixed per oz.	35c.	All Kinds Fine, Mixed per oz.	15c.
Early Winter, Mixed per oz.	15c.	Zvolanek's Gold Medal, Mixed per pkt. . .	25c.
Spencer Extra Choice Mixed per oz.	25c.	The Five (5) Papers for \$1 post paid.	

AMARYLLIS (Hippeastrum)—The most beautiful and gorgeous of all the bulbous plants. With their brilliant colors, gigantic size, there is no other flower that will make a grander show than the Amaryllis. With their three to five large six to nine inch flowers on each scape. My stock has been crossbred until it is now beyond doubt as fine as can be produced. Bulbs 50c. each, \$5.00 per dozen; for Mixed Unbloomed Seedlings. Bloomed and Selected Fancy Stock \$1.00 each, \$10.00 per dozen.

PANSY PLANTS—Large flowering. None better. 12 for 40c; 36 for 50c; 100 for \$2.00; 300 for \$5.00, postpaid. One ounce of choice Sweet Pea seed free with each dollar's worth.

— I HAVE NO CATALOG —

C. S. TAIT - Brunswick, Georgia

Headquarters for
Gladiolus "Mrs. Watt"

The Gladiolus that is DIFFERENT. Not only beautiful but DISTINCT. Seedling by Matthew Crawford. Strong grower—always erect with straight spike. BRILLIANT WINE—one color.

Price strong blooming bulbs, 15c ea., \$1 per doz.

Letter from a Boston florist who has used "Mrs. Watt" for three seasons :

Boston, January 9th, 1917.

To MR. HOMER F. CHASE, Wilton, N.H.

Dear Sir:—Just a word of appreciation of Gladiolus "Mrs. Watt," with which we had such success last season.

My reason for writing you is because I think it would be advisable for you to plant a greater quantity of bulbs of this particular variety for next season as they have proven one of the best sellers with us.

It has a wonderful color, and lasts, it seems to us, much longer than some of the other so-called good keeping varieties, and will undoubtedly be in greater demand next season.

Very respectfully yours,

(Signed) PENN THE FLORIST, by Henry Penn.

	Each	Doz.		Each	Doz.
Mrs. O.W. Hal'day	35c	\$3.00	Peace	10c	\$.75
Dawn	10c	1.00	War	15c	1.00
Schwaben	15c	1.25	Ida Van	10c	.75
Pink Perfection	15c	1.00	Princepine	8c	.50
Niagara	10c	.75	Panama	8c	.50
Prophetesse	10c	.75			

One-half dozen each of the following for \$3.00:

"Mrs. Watt," Loveliness, Myrtle, Rouge Torch, Sulphur Queen. Single bulbs or by the dozen post paid.

I ISSUE NO RETAIL CATALOGUE.

List planting stock "Mrs. Watt" and commercial sorts to the whole-sale trade.

Homer F. Chase

Grower of Gladioli

Wilton - - - New Hampshire

Lily White

**Pure as the Lily.
White as Snow.**

With a stronger constitution than any other pure white Gladiolus, absolutely healthy, a profuse yielder of bulblets, and, rare quality, multiplying heavily by division (5 bulbs in trial bed produced 16) "Lily White" stands in a class by itself.

The blossoms (see front cover page) are of lovely form, placed nicely on straight, tall spikes and are of good size and perfect purity of color.

If not delighted, your money will be cheerfully refunded. Send your order now.

Strong bulbs 50c each, \$5.00 per dozen.

Not more than one dozen to a customer this season.

Try "Myrtle" the perfect pink Gladiolus. See Jan. number for description. 20c each, \$2.00 per doz. Select seed 25c and 50c per packet.

Have you received my booklet? It's different.

H. E. MEADER, Gladiolus Specialist.

Dover - - - - New Hampshire

WE GROW

ALL OF THE STANDARD
VARIETIES OF THE

Gladiolus

and assure you that every thing that we offer is grown right here on our own place, and guarantee all bulbs to be free from disease.

In Addition

to Gladioli we grow a very complete line of Dahlias, Cannas, Tigridias, Montbretias, and other bulbs and plants for the spring season.

Ask Us

before placing your spring order. You'll not regret it.

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Grinnell - - - - Iowa

Gladioli

all sold but we have left a small surplus of the best cut flower varieties of

DAHLIAS

only a few varieties but each the best of its color for cutting. List free for your name on postal.

SPECIAL :

A surplus of strong, bushy, field grown plants of Shasta Daisy "Alaska." These plants will give a mass of fine flowers for cutting and under good cultivation will produce flowers four to five inches wide, blooming for three months. While they last 60c. a dozen, \$4.00 per 100. Strong seedlings of above that will bloom this summer, \$1.50 per 100. Fresh seed of above \$1.00 per oz. (One-half what you will pay elsewhere).

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GIANT NEW GLADIOLI

IT IS NEEDLESS to comment on the success of the Austin originations. These varieties have been developed with the firm belief that the tallest and most graceful Gladiolus in existence has been produced. You will not have the *best* in Gladioli until you grow them. A magnificent collection of eight sorts is now offered the public.



EVELYN KIRTLAND

Note Illustration measuring length of spike with yardstick.

new touch of color was added to our gardens last a brilliant mauve that is sure to become popular." *Montague Chamberlain, in August issue The Garden Magazine.*

"Evelyn Kirtland is the most magnificent Gladiolus I have ever seen and I have seen most all there are."—*Wilbur A. Christy, Secretary-Treasurer Gladiolus Society of Ohio.*

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Have Schwaben, Mrs. Pendleton, Pink Perfection, Mrs. W. E. Fryer, Golden King and all the rest.

"Home of Elm Hill Gladioli"

Austin-Coleman Co.

Wayland - - - - - Ohio

EVELYN KIRTLAND—Strong substance, beautiful shade of rosy pink, darker at the edges, fading to shell pink; brilliant scarlet blotches on lower petals. Entire flower showing glistening, sparkling luster.

GRETCHEN ZANG—Most beautiful soft, melting shade of pink blending into scarlet on lower petals.

HERADA—Immense size on tall spikes. A startling novelty of pure mauve, glistening and clear.

WAMBA—Enormous blooms of deep salmon. No collection complete without it.

CARDISUN—A large bloom, dark velvety red with nearly black throat.

BERTREX—A sterling white of great substance; winner silver cup for best seedling.

ROSE WELLS—Large, wide open blooms; light rose, clear color, small attractive blotch of lilac rose and yellowish green.

ORIOLE—A sterling light yellow with deeper throat.

This collection has won 12 prizes including Silver Cups.

One bulb each entire collection \$2.50; 3 collections \$7. Pre-paid. Orders filled in rotation.

"America has recently added to our wealth in important Gladiolus two pink beauties that have been named Evelyn Kirtland and Gretchen Zang. * * * A summer by the introduction of Herada, Montague Chamberlain, in August issue

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Largest stockholders in Holland of **MURIELL**, a fine combination of lilac and porcelain, colour just like a cattleya, received the most attention at the Boston Show, per dozen, \$12-; per hundred \$80- for cash with order.

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Price List with full descriptions on application.

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The most popular Gladiolus grown.

Planting sizes, 1" to 1 $\frac{1}{4}$ ", \$4 per hundred; $\frac{3}{4}$ " to 1", \$3 per hundred;
 $\frac{3}{8}$ " to $\frac{3}{4}$ ", \$2 per hundred.

The well known varieties ROSE BUD, IDA VAN, SUMMER BEAUTY and MISS LUCILLE.
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M. F. WRIGHT, Gladiolus Grower

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Send for my Catalog at once, it will tell you the story.

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Three Prize Winners at the Panama-Pacific International Exposition,
San Francisco, Cal., 1915

"Capt. Asher Carter Baker"

Flowers 4½ in. diam. Spikes 4 ft. tall.
Bright Scarlet. Strong bulbs. \$1.00 each.

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Flowers 5½ in. diam. Spikes 5 to 6 ft. tall.
Delicate Rose Pink. Strong bulbs \$1.50 ea.

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Flowers 5 in. diam. Spikes 5 to 6 ft. tall.
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YOUPELL'S Ne Plus Ultra Mixture

is made up from named varieties of various colors (except blue) and is recommended with the greatest confidence. It will especially appeal to those who want a variety of the choice flowers without the trouble of making a selection.

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are grown right, flower right and the price is
right. The following postpaid:

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EMPRESS OF INDIA - - -	.25	NIAGARA - - -	.50
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Or one bulb of each separately labelled sent post paid
For One Dollar.

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- 25,000 America 1 $\frac{1}{4}$ inch.
 25,000 Augusta 1 $\frac{1}{4}$ inch.
 50,000 Mrs. Francis King
 1 $\frac{1}{4}$ inch.
 25,000 Mrs. Francis King
 1 $\frac{1}{2}$ inch.
 50,000 Mixed 1 $\frac{1}{2}$ inch.
 50,000 " 1 $\frac{1}{4}$ inch.
 50,000 " 1 inch.

Also want prices on all leading varieties in all sizes.

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Care, The Modern Gladiolus Grower
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Ideal Bulb Planter & Transplanting Tool

(Patent applied for.)

Capacity about 2000
 bulbs per day.

Works equally well in solid
 turf, rocky soil, or clear gar-
 den soil.

A GREAT LABOR
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Price \$2.00 each.

By parcel post 25 cents extra.

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- 1 Doz. Richard Diener's Mixed Hybrids**, large size bulbs, **\$5.00**
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 GRAND PRIZE P. P. I. E.

Dr. Frederick T. V. Skiff (Awarded Gold Medal at P. P. I. E., 1915)
 Light flesh pink like "Panama" but larger; produces up to 130 flowers to the bulb.
 Flowers 6 inches in diameter; stems 6 feet high. All bulbets or corms will produce
 flower spikes five months after planting. Very rapid propagator. (Our Own produc-
 tion.) **Large bulbs, \$3.00 each.** **Small bulbs, \$1.50 each.**

Captain Asher Carter Baker (Awarded Silver Medal at P. P. I. E.)
 Rich, velvety red with darker center. Flowers 5 inches in diameter; stems 4 to 5
 feet high. Best red shown at the San Francisco World's Fair.
Large bulbs, \$3.00 each. **Small bulbs, \$1.50 each.**

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We have selected seed from all our new varieties as well as from our 50,000 1916 seedlings. All the seed is evenly mixed. The sizes of the flowers range from 4 to 9 inches in diameter, and the height of the stems is from 5 to 8 feet. The seedlings from this seed will flower in from 5 to 6 months after sowing, and many will have three or four side shoots, aside from the main shoot, in the first year. They will range in all colors imaginable, but salmon, white, lilac, pink and rose pink are the leading colors. There is no other firm in the world that can put anything like these on the market.

Seeds per package, \$1.00.

Seeds per dozen packages, \$10.00

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	EACH	DOZ.
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BRENCHLEYENSIS	.04	.30
ISAAC BUCHANAN	.08	.75
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COLUMBIA - - -	.06	.60
MAY - - -	.06	.60
MAIZE - - -	.25	2.50
MRS. H. W. BEECHER	.08	.75
PACHA - - -	.08	.75
PRIMULINUS HYBRIDS	.06	.60
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MIXED HYBRIDS -	.05	.50

and other kinds on my list sent prepaid by parcels post to any zone. One of each of above list, prepaid, 75c. One dozen of each, \$5.00, by express collect.

Descriptive list on application, also wholesale list for growers and dealers.

John H. Umpleby, Lake View, N.Y.
R. F. D.

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One bulb of each for trial \$1.75

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These are a cross of Species Primulinus with Kunder's Ruffled Glory and many of them show more or less ruffles. All sizes and forms. The colors are well blended although all colors and shades are represented, as yellow, salmon, rose, pink, terra cotta, apricot, etc.

Per dozen, postpaid	\$.50
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Planting stock $\frac{3}{8}$ to $\frac{3}{4}$ per 100	1.00
Bulbets, postpaid, per 1000	1.00

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Ashland, Mass.

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These are all finished off in natural colors and are suitable for framing.

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Gladioli



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By the Million For the Million

My new catalogue describing 96 distinct varieties and illustrating some in full colors, is now ready for mailing—free. Some excellent mixtures and three special offers make the book well worth having. Please send for it *today*.

Mary Fennell

The most beautiful lavender Gladiolus on the market today. A true colored reproduction of this variety appeared in the January issue of *The Modern Gladiolus Grower*.

First size bulbs.—Each, 20c.; Per dozen, \$2.00; Per hundred, \$15.00

Second size bulbs.—Each, 15c.; Per dozen, \$1.50; Per hundred, \$12.00

Third size bulbs.—Each, 12c.; Per dozen, \$1.15; Per hundred, \$ 9.00

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Soft rose pink, flaked with a darker tone. Very handsome.

First size bulbs.—Each, 20c.; Per dozen, \$1.75; Per hundred, \$12.50

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Six bulbs will be sold at the rate of a dozen; Twenty-five will be sold at the hundred rate. No orders for less than fifty-cents will be accepted.

Securely Packed—Postpaid.

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BE SURE TO SEND FOR MY CATALOG TO-DAY. IT IS FREE.

JELLE ROOS

Department D

Milton, Mass.

CATALOG for 1917

is ready. Send for a copy.

Bulbs listed at:

50c per doz., \$2.50 per 100:

AMERICA, HULOT, HALLEY,
KING, TACONIC.

75c per doz., \$5 per 100:

NIAGARA, PANAMA.

60c per doz., \$3 per 100:

CRACKERJACK, EMPRESS OF
INDIA, LILY LEHMAN, PRIN-
CEPINE.

\$1 per doz., \$7 per 100:

GOLDEN KING, IDA VAN,
KING ARTHUR, PEACE, PINK
PERFECTION, SCARSDALE,
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Trade Price List for Growers and Dealers only. Write for it.

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AWARDED FIRST CLASS CERTIFICATE

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Send for our retail list describing nearly 200 of the better old and new varieties. All of our own growing at fair prices. Wholesale list for dealers and large growers.

We make a specialty of furnishing planting stock of the best new and standard varieties to other Gladiolus Growers, Florists, Market Gardeners, Nurserymen and all others who grow Gladioli commercially.

A special price will be quoted on a list of your wants if you will state size and number of bulbs of each variety wanted.

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GLADIOLUS SPECIALIST

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MINN.

THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
Published Monthly by Madison Cooper, Calcium, New York.

Vol. IV.

MARCH, 1917

No. 3

GLADIOLUS—
*MRS. G. W.
MOULTON.*

Originated by A. E. Kunderd, Goshen, Ind. Owing to its large and graceful habit of growth and deep red flowers, it is an especially attractive variety for garden effect, and also excellent for cutting.



A beautiful red flower of the dark, rich tone of the American beauty rose splashed with a darker tone on the inferior petals which also bear delicate tracings of white.

The spike is tall and straight and the leaves large and firm.

The Gladiolus Manual.

BY W. W. WILMORE, JR.

CHAPTER XVII.

Shipping Corms and Cut Flowers.

PACKING goods for transportation is an art, and many things must be taken into consideration; distance, weather conditions, size of shipment, quality of stock shipped, mode of transportation, and other little things that may prove disastrous in the end.

If a shipment is to be sent a great distance the greatest care possible should be taken to insure safe arrival; and if the shipment be corms the case should be well lined and as light a case used as possible to reduce transportation charges. Pack to repel heat or frost as the case may be. Mark each package contained in the shipment plainly so that the goods will not be mixed in unpacking. Tie each package safely so that no two can run together from rough usage in transit. If the shipment be by freight the box or boxes, as the case may be, should be bound with strip iron so that they will not break or come unnailed. Boxes should be plainly marked bearing both the name of the shipper and consignee, and the contents also should be marked on the case and the number of cases in the shipment on each case.

Shipments by express do not need as much attention as do freight shipments, as they travel faster and should be at their destination without delay. Freight shipments are always delayed and sometimes sidetracked for weeks at a time. Perishable goods, such as are Gladiolus corms and other bulbs, and also plants, should always be sent in refrigerator cars, then if delay occurs there is not so much danger of stock being damaged or destroyed by heat or frost.

In packing shipments, first get an idea of the size box needed to accommodate the shipment, then line well with newspapers, as a rule for ordinary shipments four to six ply is ample. After checking in the various packages, they are ready to pack. They should be placed as closely together as possible to prevent chafing and rubbing. If there be more space in the case than is needed, this should be filled with some sort of packing material such as excelsior, straw or old papers. The lid should then be securely nailed, and if case is frail strip iron should bind the corners.

In shipments where there is one variety of a kind large enough to fill a case, these are turned in loose with a large label to mark the contents, and should be protected by some loose material as buckwheat hulls, sawdust or some other filling material to prevent heating and chafing. In fact, it is well to provide small packages with this material. One important thing that must be borne in mind is not to ship stock in large quantities unless thoroughly dry as this may terminate in disaster. When moisture is contained in a closed case it starts mold which, if not liberated, will cause rot and damage to the entire shipment. Corms that are not thoroughly cured give off moisture of themselves which may damage the shipment. When once the fungus starts which causes rot, the stock may become infected as follows: One rotten or infected corm today makes 4 tomorrow, 16 the following day and 64 the next day and so on in multiples of four for each succeeding day. Therefore it would not take long to ruin a shipment at this rate.

Most shippers use printed tags in addressing their shipments; the tag used by me is as follows:

L I V E P L A N T S .

Keep from Heat and Frost.

For.....

From..... City..... State.....
(Shipper)

This tag is glued on the top of the box and at sight the contents are evident and are handled by transportation companies as perishable goods. For cut flowers we use a similar tag which reads "Cut Flowers" instead of "Live Plants."

In shipping cut Gladioli we use the following method and have had the best results up to a distance of 750 miles. The flower spikes are cut a moderate length, being careful to remove as much foliage as possible to reduce transportation charges and still not injure the appearance of the flower. These are cut and bunched,

25 in a bunch, being tied with cotton twine, all one color in each bunch. We start cutting from one to two hours before packing. We find this an advantage as they are somewhat wilted by the time one is ready to pack. They can be handled more roughly without bruising and are more pliable. For long distance shipments the spikes are cut as soon as the first buds appear, and are ready to open as soon as they reach their destination. Packing depends largely on the quantity in the shipment. In lots of 200 or more we find barrels to be the best carriers. The barrels are lined with four ply of ordinary newspapers, and the bunches are wrapped separately in one sheet of paper and placed in the barrel on end, stem down. After the barrel is filled the contents are well watered. No water is allowed to stand in the bottom of the barrel and if it be water-tight, holes should be bored before packing. The tops are allowed to project and no covering is provided for the top. This has two advantages, a circulation of air is provided which prevents heating and the contents of shipment is noticeable by carriers, which insures quick delivery. Smaller shipments are usually packed in wooden cases wrapped in the same manner as before described but nailed tight. We first used a crate which was open at the top. This crate was 10 inches square at the base and 18 inches square at the top, being 24 inches high. We shipped in these crates the same as we do now in barrels, but find the latter cheaper.

The Gladiolus is perhaps the longest lived flower we have and can be shipped great distances. When the American Gladiolus Society held their annual show at Boston, Mass., a few years ago I exhibited some cut spikes more to be loyal than competitive, and was awarded second prize on the best vase of 25 spikes of any one White variety. This variety was *Alice Carey*. The shipment traveled from Denver, Col., a distance of over 2000 miles.

We find from experience that stock which travels in a wilted condition will take up water more readily than stock that is hardened in water in a cool cellar or ice-box before shipping. Stock is also lighter in weight if wilted than when filled with water.

Small shipments of corms or cut flowers should be sent by parcel post. When using this means of delivery, corrugated paper boxes are the best. These can be gotten in all shapes and sizes from large paper houses. They are light and still they are strong. Shipments are packed

in the same manner as express or freight shipments, using plenty of papers and packing. The same tags are used also. Parcel post shipments for short distances are much cheaper than express, and are perhaps quicker, whereas larger shipments may be cheaper by express.

Plants are allowed second-class rate by express but cut flowers take strictly first-class rate.

[Continued next month.—Chap. XVIII, "Origin of Varieties."]

Bulbs Indoors.

"I must show you my hyacinths," a little woman said, bringing out hyacinth glasses with a few hair-like roots showing, and green points twice as high. "I never have good luck with hyacinths," the little woman went on, "but I just can't resist trying them."

Of course we told her to return her glasses to a dark, cool room or cellar, until the roots reached the bottom of the glass, and then bring them to the warmth and light. If the tops begin to grow before the roots are well established, there can be no good blossoms, for the bulb has nothing to feed with. All bulbs require a good root system. Tulips, hyacinths and narcissi brighten the home in the winter if they are cared for rightly. They may be planted as late as November, and stored in a cold cellar until well rooted. If there is no cellar, dig a trench in the garden, twelve to sixteen inches deep; put sand or cinders in the bottom; set the pots close together, cover with an inch or two of sand, and then fill up with earth, rounding the top to shed the water. When the ground begins to freeze, cover with six or eight inches of stable manure, to prevent deep freezing. Bring in a pot at a time, every two weeks, for a succession of bloom.—*Wallace's Farmer*.

A farmer cleaned the weeds from the sides of the road in front of his house and planted flowers instead. All summer long the flowers bloomed and brightened the hearts of all who saw them. Passersby appreciated this beauty spot along their way and praised the man who had made it. It was a little thing for him to do and yet it meant much to many people. Why not have more such beauty spots? Why not beautify the roadsides, the school grounds and the other places that are usually left to grow up in weeds? This is not the season to plant flowers but we can all be thinking about these things.—*The Farmer's Guide*.

Treating Gladiolus Corms for Disease Before Planting.

This is where THE MODERN GLADIOLUS GROWER has proved its worth to me as an instructor in the successful growing of Gladioli.

Last spring I decided to treat all my planting stock of Gladiolus corms with a solution of formaldehyde as directed by Mr. G. D. Black in his article on this subject in THE MODERN GLADIOLUS GROWER for April, 1916. Having had no previous experience in this line, I was a little anxious as to the results, noting that in using one pint of the standard 40% formaldehyde or formalin to 20 gallons of water, and not being able to plant the corms thus treated for a week, owing to wet weather, he lost half an acre of fine planting stock. I decided to use one pint of formaldehyde to 30 gallons of water, as recommended by most of the State and Government Experiment Stations for treating potatoes.

I used two large-size rain water barrels, prepared the solution, placed all corms of $\frac{3}{4}$ " to $1\frac{1}{4}$ " in muslin sacks and immersed in barrel No. 1, and all corms under this size I placed in sacks in barrel No. 2. To the sacks I tied a long string and attached a tag bearing the name of the variety which was hung on the outside of the barrel. Barrel No. 1, I allowed the corms to remain 10 hours before draining, and barrel No. 2, eight hours. I then placed wire screens above the barrels and tubs, then placed the sacks on the screens to allow them to drip. Here is where my anxiety commenced. I faced the same experience with wet weather that Mr. Black did when he lost so many corms. The day I took them out of the solution to dry, it started to rain, and with an east wind at this time of the year looked like a three or four days' rain,

which proved true. Fearing I might suffer the same loss as Mr. Black, I was very anxious and decided to take no chances. The next day after taking the corms from the solution, I decided to fill the barrels and some tubs with clear water, replace the corms and allow them to remain four hours, drained off this water and filled the tubs a second time with clear water and replaced the corms for two hours longer before taking them out to dry. I felt satisfied the formaldehyde had done the good work it was intended it should, and that soaking them in clear water could do no harm.

The corms were planted the 5th, 6th and 7th day after treating in the solution, with the result that every bulb came up in from 15 to 20 days, and in harvesting my crop in the fall, did not find one single diseased corm. To the best of my knowledge my Gladioli were free from disease in the first place, but I firmly believe that an ounce of prevention is better than a pound of cure, and that all bulbs would be better if growers would in all cases treat their stock before planting. It requires considerable time, but will well repay one to do so.

I do not make the claim, that had I not soaked the corms in clear water when I found it impossible to plant for several days, that the result would have been disastrous. I simply was taking no chances, and did what I reasoned would be the safest thing to do, and having the experience of Mr. Black in mind decided to profit by the experience of others.

T. H. FULLER.

A subscriber in renewing for three years states that it is worth 50c. to see the illustration on the first page of THE MODERN GLADIOLUS GROWER twelve times per year.



The Carmichael Orchards, Shannock, R. I., sent us the above photograph of the increase of three bulbs of the variety *Red Queen*. This division of corms is not uncommon and results chiefly from the planting of rather old, mature corms. The tendency is for these old corms to divide and throw few flower spikes or none at all.

MRS. AUSTIN'S TALKS.

SOME ROSES.

The electric line through the Mahoning Valley was built on the road-bed of the old Baltimore & Ohio R. R., formerly called the Pittsburg & Western, whose curves and windings were accounted for by its paralleling, a part of the way, the old tow-path of the abandoned Ohio canal. Leaving Ravenna on the 12:20 car going east, we rode through a pretty bit of woods. The car moved slowly as if loth to leave the place, but more likely on account of the curves, and from its windows we looked upon the scene, already familiar, but which had never seemed more interesting than in the cool beauty of that winter day. The greedy lumberman had been there and most of the large "timber" was gone, but as if in first aid to her injured wood-child, Mother Nature was covering its scars with a quick, rank growth of shrubbery, vines and plants. Planted in Nature's own way the groupings were interesting, nothing crowded, and each individual plant plainly showing distinctiveness of character, while the grays and browns in contrast with the background of winter white made a pretty picture.

We left the car at Newton Falls, now an up-to-date little town, and in observing its modern improvements of electric lights, paved streets, sewers, fine churches and pretty homes, we forgot the muddy streets and degrading saloons of former years, the "Dicker Day" which would have been a very pleasurable one of home celebration, if it had not filled the village "lockup" with those that had fallen before the tempter. Newton Falls has good shipping facilities. In addition to the electric line there are the B. & O. and New York Central, and Pennsylvania service over the B. & O. and, O yes! there's the "Hoodlebug" over the old B. & O. to Warren. Being located on the inter-county highway, it is also an automobile thoroughfare from Pittsburg to Cleveland. Its greatest asset, however, is its alluvial soil, which, together with the shipping facilities and proximity to the coal mines of Palmyra constituted the drawing card which caused the Cleveland Cut Flower Co. to ship their fifty carloads of greenhouse material and rebuild at Newton Falls. We are told that before deciding to make the change, that soil was taken to Cleveland and especially tested for the growing of roses, and

although soil was taken from other places for trial none possessed the food qualities that would grow roses to such perfection. The great establishment of 250,000 sq. ft. of glass represents a small fortune with promise of further greatness, and of even greater value to the community will be its uplifting and refining influence in teaching and inducing a love for flowers.

As we entered the packing house we were welcomed by the efficient managers, whose evidence of their principles was manifested in the great punch bowls being filled with a delicious but harmless beverage. Leaving our wraps we passed on, visiting in turn the various houses where Roses, Carnations, Sweet Peas and other flowers and greenery were in prime condition, when entering with the joyous interest of Professional Florists, came trooping the members of "The 6th City Florists' Club," seventy-seven strong, who spent the afternoon in inspection followed by a six o'clock dinner.

We had been planning an addition to the rose garden, using the Hybrid Perpetuals, *Paul Neyron*, *Mrs. John Laing*, *Prince Camille de Rohan*, *Ulrich Brunner*, *Gloire Lyonnaise*, *Anna de Deisbach*, *Frau Karl Druschki*, and some others all of which we have grown with fairly good success, but the greenhouse varieties, the *Killarneys*, beautiful *Ophelia*, dainty *Wards*, and tiny *Sweethearts*, filled us with a desire to add some of the tender varieties to our summer garden, but we realized that to grow them satisfactorily they must have the proper requirements of both food and cultivation and a selection of varieties suitable for our purpose. The growers advise a clayey loam, well enriched, and intensive cultivation. A bit of experience is sometimes invaluable. A number of years ago we had a few Hybrid Perpetuals planted in sandy soil and, although they were well enriched and cultivated, we were disappointed in the color and size of the bloom, which was especially noticeable in the variety *Prince Camille de Rohan*, and we were inclined to think that the varieties were not all true to name. That summer our cellar was enlarged and the clay soil that was thrown out was, with sandy surface soil, graded up near the house and well enriched for the purpose of growing flowers. As the plot received sunlight on the east and south sides and was protected from the cold winds on the north and west by the house, we believed it to be an ideal location for our roses and transplanted them from the old sandy bed to the one with part clay. When they came into bloom

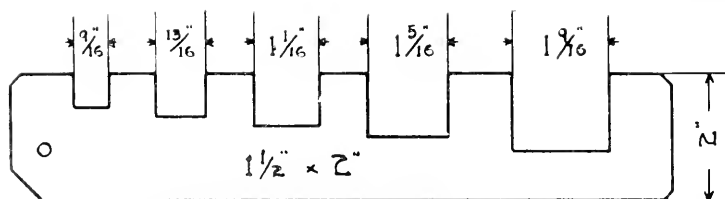
it was plain to be seen that we had *happened* to select not only a good location but much better soil conditions, and *Prince Camille de Rohan* rewarded us by being loaded with large, rich, velvety blooms.

The Hybrid Teas which are a class which came from a cross of the Teas and Hybrid Perpetuals, are marvelously free bloomers and combine the better traits of the parent classes, and with some protection are hardy in all but extremely cold climates. The Teas bloom in great profusion the entire season, producing especially fine blooms in autumn when the nights are cool. In this class there are beautiful shades of yellow-salmon and apricot lacking in the other classes. They are not hardy and like Geraniums must be planted out each season but specialists in summer roses grow them in such quantities that they can be bought as cheaply as Geraniums or Salvias, and like them, should be in every garden.

MRS. A. H. AUSTIN.

One of our subscribers in California who has been much interested in the files of THE MODERN GLADIOLUS GROWER, offers the suggestion that new subscribers who wish back issues should order the bound volumes and pay the small difference in price as the matter contained therein arranged with the index and the continued articles running therein make them especially valuable in the bound form. We can, of course, supply a complete file of the loose issues, but the cost of bound volumes is but 50c. extra per year and surely they are a great addition to any flower lover's library. See advertisement.

The variety *Daisy Rand* illustrated in color on our inside back cover page this month is doubtless familiar to many growers. The florists are especially attracted to this variety on account of its useful shade of pink. *Daisy Rand* is also of somewhat distinctive form and is considered by some growers to be one of Mr. Kunderd's very best.



Hand Grader for Gladiolus Corms.

When the Editor visited S. E. Spencer at Woburn last fall, Mr. Spencer had a grader stick similar to the one illustrated above. Mr. Spencer's grader had a handle on it on the end where the hole is shown in the drawing. It would seem, however, that a handle is unnecessary. A piece of $1\frac{1}{2} \times 2$ " pine with notches cut as shown will make as practical a grader as we have ever seen. It should be noted that the notches are made $1-16$ " larger than the standard sizes of corms. Mr. Spencer suggests a shaving only. This is to facilitate the work of grading. Some slim nails driven into the stick where the projections are before cutting the notches will prevent the projections from breaking off in handling.

We are giving Mr. Spencer credit for this idea as we have never seen it in service elsewhere, but it might have originated with some other grower. Has

anyone a better scheme for determining the size of Gladiolus corms?

Mr. Spencer uses a set of wire sieves for sorting out the smaller bulbs, but this process is not absolutely accurate and when the bulbs are being counted the hand grader is used.

It might be suggested that in grading it is not necessary to try every corm in the grader, but only an occasional one to keep the eye trained to the right gauge. Some people have the sense of proportion so well developed that they can tell almost at a glance what grade a Gladiolus corm should go into. Others never seem to be able to acquire the faculty.

According to the standard adopted by the American Gladiolus Society, all bulbs measuring $1\frac{1}{2}$ inches and up are classed as No. 1, those that are loose in $1\frac{1}{2}$ and tight in $1\frac{1}{4}$ are No. 2, and so on down the line to No. 5, ($\frac{1}{2}-\frac{3}{4}$) commonly called planting size. All advertising price lists and catalogs should conform to this standard of measure in order to avoid confusion and misunderstanding.

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Special favors to none, and a square deal to all.

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The Boston Show.

The Boston Gladiolus Show last August was not so attractive as a picture, as was the show in Newport in 1915, but from the Growers' point of view the Boston show was superior.

There were a larger number of varieties on exhibition at Boston, and the method used to display most of these — one spike in a vase — had merits that were appreciated by those who desired to make a careful examination of the blossoms. The excellence and the defects are much more readily observed by this method than when the flowers are massed in the artistic displays which prevailed at Newport. There were some fine examples of artistic grouping at Boston which received their just reward of praise, and it was universally acknowledged that they perform a most useful part in teaching us the possibilities of the Gladiolus for decorative effect; but the growers found much satisfaction in the open display.

Another lesson that the Boston Show brought home to us more clearly than any earlier exhibit had demonstrated was found in the abundant proof that we are no longer obliged to depend upon Europe for attractive new sorts. The display at Boston proved that there are being produced in this country a larger proportion

of Gladioli of superior merit than is being produced in Europe. There were on exhibition a large number of new varieties of European origin and some of these were welcome additions to our list of "beauties," but the major portion of the finer sorts were American, while a large group of the foreign varieties seemed quite commonplace. MONTAGUE CHAMBERLAIN.

Explaining Variation in Prices.

From time to time we hear rather radical and unreasonable criticisms of the difference in prices charged by different growers of Gladioli. We are impelled to defend Gladiolus growers and try to explain this variation in prices.

It must be remembered that although one grower might ask twice as much or three times as much for any certain variety as another grower, that this does not necessarily mean that the high priced man is altogether wrong in his judgment, nor is he necessarily unreasonably avaricious. For instance, it is well known that Holland growers have been pretty low in their prices during recent years, but at the same time, it may be noted that their prices on recent American introductions are no lower and in many cases even higher than American growers have asked for the same thing. Often

low prices are quoted on certain varieties which are in surplus to relieve an unbalanced stock. The same variety in the hands of another grower and if he had but a small quantity of it, might be quoted much higher.

Therefore, be just toward the Gladiolus growers. They are only human and possibly the high priced man's stock is worth what he asked for it as compared to the low priced man's. Low prices often mean inferior quality. MADISON COOPER.

With this, the March issue of THE MODERN GLADIOLUS GROWER, we are sending index for Volume III which ends with the December 1916 issue. We are late this year in sending it owing to pressure of office work.

We would call attention to the fact that the three bound volumes of THE MODERN GLADIOLUS GROWER, 1914, 1915 and 1916, comprise a very excellent library of Gladiolus information and with the indexes bound in as we have them, quick reference is easy. The price of the bound volumes is \$1.25 each postage prepaid—\$3.75 for the three.

Those who are short of any issues of the first three years of THE MODERN GLADIOLUS GROWER can obtain them at the rate of 7c. each.

On page 48 there is an article by John Lane on Gladiolus growing in Australia. The fact that he is growing two generations in one year is certainly of interest. Mr. Lane did not go into the details of the proposition, but we infer that this is made necessary and possible owing to a warm and moist climate which makes it difficult to hold corms dormant. We wonder if this is an advantage or a disadvantage and we hope to hear further from Mr. Lane on the subject. It is possible that planting corms with a short period of rest might result in some deterioration or bad effect.

Gladiolus growers have noticed perhaps that a corm which is very late in blooming as compared with others of the

same size, is likely to produce an extraordinarily large and fine flower spike. The Editor had this result the past season, especially in connection with the variety *Lily Lehmann*. R. C. Boomhower writes us of a similar occurrence with *Augusta* and sends photograph of a spike which bloomed about October 1st. He states that the spike survived two weeks and that there were eight blooms open all the time.

One of our correspondents suggests that deterioration to Gladiolus corms from year to year depends on whether the particular variety has a tendency to form many or few cormels, the most prolific varieties deteriorating faster than those that form few or no cormels. It has been noted that those varieties that increase mostly by division do not seem apparently to lose vitality and varieties have been known that divide into two or three new corms each year where there is apparently no deterioration from year to year. Could not some of our experienced growers throw some light on this problem and write it up in detail?

Those who have not already ordered Gladiolus corms for spring planting certainly have no further excuse for delay. Even now it is more than probable that some of the varieties that are wanted have been sold out. March is, of course, not a month during which there are many Gladiolus corms put into the ground, but April is the month of largest planting and it is always well to have stock in hand so as to know exactly what to depend on. Get a few planted as early as you can work the ground for early bloom, and plant every two weeks until June 15th or even July 1st, and you will get a very long period of bloom.

Purchasers of Gladiolus corms, seeds and plants sometimes find it distinctly advantageous to order from the grower nearest them. This is not always the case, of course, but other things being equal, ordering from near home usually produces best results.

Raising Iris From Seed.

BY WILLIS E. FRYER.

I HAVE raised the German, Dwarf Bearded, Beardless, Siberian and Japan Iris. Of the thousands of seedlings that I have raised of the Siberian I have never given one a name. The best seedlings I ever raised of these were from seed of the *Snow Queen*. The flowers were blue and white, and many of the blue ones were very good, and as large or larger than any named variety I have ever tested. In the Dwarf Bearded there is not much variation, but have raised a few that are worthy of a name. The Beardless are similar to the Siberian, and not enough variation. I have seedlings of these which have foliage four to five feet high, and they would be quite ornamental for the foliage alone. As the foliage stands erect it enhances its value. I have raised some wonderful varieties of the Japan Iris, but as these are less dependable in Minnesota than the others I have never named one.

I find there is more chance for variation in the German Iris than in other species, and will devote my attention mostly to them in the future. In a row of transplanted seedlings a dozen rods long, and set one foot apart in the row I do not believe there were any two alike, and some wonderful ones, too. Of these I have only named four, but the best of them have been marked, and will be transplanted in a new plot next September. Here their behavior will be noted, and as many visitors will see them, I will get their opinion of them also. I do not praise nor condemn a variety by the visitor's opinion, but I am always anxious to have those who are experienced in judging flowers see them before they are disseminated.

GATHERING THE SEED.

German Iris do not seed freely, and I have never been able to gather a single seed from many named varieties. For this reason I save every seed possible from them. *Her Majesty* and *Queen of May* seed very well with me, and some of my best seedlings have been raised from seed of these two varieties. My seedlings bear much seed, and I have often seen immense seed pods on them over two inches in length.

When the seed begins to ripen, I go over my beds every day, for if allowed to get too ripe the seed pods will burst open, and many of the seeds will be lost. If they are gathered at just the right time the seed will be nice and plump, but if

they are allowed to get too ripe the seed will shrivel. As soon as the seed is gathered it is cleaned and placed in moist sand. I have a receptacle large enough to hold all of the seed when gathered, and the seed is placed in this each time it is gathered, and covered with moist sand.

The seed is planted in late fall, and as it has not become dry it germinates very well. I have planted it as gathered, and with good success, but I prefer keeping it in moist sand. Some growers plant in the spring, but it seems to me that the seed would have a tendency to harden, and not germinate well.

SOWING THE SEED.

If the seedlings are left in the seed bed until they bloom the seed should not be planted closer than five or six inches apart in the rows, and if all grow this will be too close, for the plants will grow together, and there will be trouble in keeping each variety separate.

The plan I have adopted now I believe is the most feasible of any. I draw a hoe through the mellow soil so there will be a slight depression not over one inch deep, and the width of the hoe. The seed is sown quite thickly in the mark made by the hoe, and covered from one-half to one inch deep. The soil is then firmed with the foot over the seed, and then raked very lightly. The following September (the last of the month preferred as the little seedlings make considerable growth this month) they are transplanted in rows about three feet apart, and one foot apart in the rows. If transplanted as stated there will be no danger of getting them mixed for the plants cannot be divided when so young. A large percentage of them will blossom the first season after transplanting, and all the second season. After growing them two seasons, the best of them can be marked, and transplanted in a new bed in September. Do not be in a hurry to name them, and then only a few of the very best. The naming of poor varieties of different flowers is altogether too common, and do not be guilty of this outrage. When you have a variety you believe is extra good it is a good idea to get the opinion of others well qualified to judge its merits before you offer it for sale, and do this while your stock of them is yet small, for it may not be so much of a disappointment to you.

Only those who raise new varieties of flowers know of the pleasure of visiting the new creations each morning, and seeing their beauty for the first time. This alone will well repay one if there was no other remuneration, and if you create a really valuable variety it will be a benefit to mankind, too.

To Grow Prize Winning Gladiolus Bloom.

We are pleased to extract from A. E. Kunderd's new catalogue directions for growing Gladioli under intensive culture. We wish to warn those interested, however, that forcing growth as suggested is likely to result in diseased or worthless corms for the next year's planting. In other words, if growth is forced this year it is quite likely to result in such an exhaustion and possible disease that the new corms cannot be depended on for best results the following year. We would also caution those inexperienced in the handling of fertilizer about using more than quantities indicated. Excessive quantities of commercial fertilizers, stable manure or any other stimulant to vegetable growth may result in the death of the plant.

In what we have said above it is not our intention to criticise Mr. Kunderd's directions for growing exhibition bloom. The directions are excellent and this is the reason we are printing them. It was our thought in offering the above suggestions to caution against expecting too much from intensive culture. There is an old saying "Wouldst thou both eat thy cake and have it?"

This saying is true in this case. If you force Gladioli and get exhibition bloom this year do not expect too much from the new corms the following year.

The following is from Mr. Kunderd's catalogue :

"We often receive inquiries as to how to grow giant flowers and plants of the Gladiolus, such as are sometimes seen at exhibitions and described in catalogs. Gladioli may be grown to extremely large sizes if forced by unnatural methods, if soil and culture is of the best possible. If possible, the place where the bulbs are

to grow should be heavily enriched the preceding year, and a heavy dressing of richest barn manures, well forked in, in the fall. In addition, a good coat of same materials should be spread over the spaded surface, in order that its strength may be well leached into the soil during the winter and early spring. Some growers also add pulverized sheep manure by scattering along the trenches, before placing the bulbs, then cover the bulbs (or corms) an inch or two and give an additional application, over which the remaining soil is placed. (Ten to twenty-five per cent. of powdered wood charcoal added to the shredded sheep manure is a valuable addition.) Complete fertilizers with a good percent of potash may be used to additional advantage. Do not set bulbs too thickly. If largest plants and flowers are desired, rows should be two feet or more apart and bulbs a foot, or over, apart in the rows. After the plants are well grown, about the time the "spikes begin to shoot," and the soil is well warmed by the sun, a mulch of well prepared stable manures should be spread over the bed between the rows. At all times, water abundantly over this mulch to get the benefit of this fertility and hold plenty of moisture. Never allow soil to become the least bit dry. By carefully making applications of these methods, you can learn to grow "Giant Gladioli" with blooms 'six to seven inches across and spikes five to eight feet tall.'"

The first Gladiolus blooms are out, and what a riot of color is forthcoming? The long spires of bloom make wonderful bouquets for the house, but it takes a heavy vase to hold them, they are so long and heavy. They last a long time, and cannot be matched for daring color schemes. One is always surprised by some new burst of color as he visits the garden, and a good enthusiast gets up early in the morning and stays by the bed to watch the breaking. When a blood red bloom, with its own kind of silver sheen, breaks from its pale blue-green calyx, it is an event in flowerdom to write about, and there is a romance about pastelle tinted petals as they break over a peerless calyx that has not been written. A bed of hybrid Gladiolus blooms, that you have no right to expect formula in, will hold up more splendid surprises for watching eyes than any other garden plant. The named varieties hold up special pure-bred spires with a constancy fit for a poet's story. One never sees a homely Gladiolus bloom.—*Suburban California*.

WAYSIDE RAMBLINGS.

UNREASONABLE CLAIM FOR CROSSING.

TO THE EDITOR:—

It is claimed in a catalogue which I have recently received that through the discovery of a new law in hybridizing any flower may be doubled in size after each crossing.

Wonder of Wonders!!! The Gladiolus can be hybridized in two years from the formation of the seed, and on, and on, at least every other year. In two years Mr. ——— will be giving us blooms twice as big as those he now offers us, in two years more, four times, and in another two years, eight times as big, or of twice the diameter. He now offers them six inches across. Yes, in 1922 we shall have Gladiolus blooms a foot in diameter, in 1928, two feet; in 1934, four feet; in 1940, eight feet; in 1946, sixteen feet; in 1952, thirty-two feet—stop him, somebody, quick! Lock him up, and his secret with him. The new law might get loose, and go to operating on its own account! Violets bigger than barrel heads! Sunflowers bigger than town lots! Cucumbers bigger than Titans! Ears of corn bigger than city skyscrapers! Fields of ripening wheat, the growing grains jostling and pushing for room, spreading out across country, blocking rivers, overthrowing cities, crushing every living creature in their path! Lock him up!!!

BENJAMIN C. AUTEN.

Note by the Editor—

It is quite probable that the person who wrote the statement in the catalogue referred to, did not appreciate exactly the magnitude of same. We are all quite prone to make loose statements which when reduced to exactitude are quite ridiculous in themselves.

CROOKED GLADIOLUS SPIKES.

The weather conditions of the past season were responsible for the spikes of some varieties being caught up in the sheath of the leaf, with the result that the spike reminded one of a certain fish, crimped skate, sometimes seen in a fishmonger's shop. I think this must have been the result of the dry weather. In a paper read before the R. H. S. in 1896, Mr. J. Burrell, said: "The extreme drought and dryness of the air during the present summer (1896) has been too great an extreme on the side of dryness, and the plants suffered during August for lack of rain and moisture in the atmosphere.

Up to the end of July they never looked better and were of wonderful health and vigor, but they appear to require a fair amount of moisture near the blooming period."

From this quotation I draw the conclusion that this year the moisture did not come soon enough, nor was it plentiful enough, to release the spike from the sheath, and the subsequent rains inducing very rapid growth caused the spikes to arch.

G. C.

FAUST AND GEO. PAUL.

There has been some discussion as to whether the variety of Gladiolus sold by Holland growers under the name of *Faust* is identical with the *Faust* in Groff's (Cowee's) list. I have found the Dutch *Faust* identical with *Geo. Paul* for several years but never had Cowee's *Faust* until this year, when I bought a few from Mr. Cowee for the purpose of comparison. I have no hesitation in saying that they are absolutely distinct. In fact there is no very strong resemblance. Cowee's *Faust* seems to be identical with a variety I got from him in a mixture in 1907, which I called the new dark. The flower is smaller, rounder and more compact than *Geo. Paul (Faust)* and has a distinctly purplish tinge which is wanting in *Geo. Paul*. The stem seems, from my limited observation, stiffer and firmer and the flower has a few small whitewash spots of white, which are lacking in *Geo. Paul (the Dutch Faust)*.

I have a sort of recollection that *Geo. Paul* has been said to be the *Abbe Roucourt* of Lemoine. However, the name *Geo. Paul* has been in use here so long and is so much easier to most people that I feel inclined to stick to it, especially as the French name has never been used in any American catalogue which I have seen.

GEO. S. WOODRUFF.

IS GLADIOLUS WILLY WIGMAN WEAK?

A recent article in THE MODERN GLADIOLUS GROWER states that *Willy Wigman* does not do well with some. On my grounds I consider it one of the best white Gladioli with a blotch or markings in the throat. It is strong and vigorous and blooms extra well from the smallest corms, and it will make more show of flowers than any white variety that I have tested. It is also one of the best multipliers which is another good point in its favor. During the extreme heat of the past summer *Willy Wigman* seems to withstand the weather among the very best.

W. E. FRYER.

The Dahlia.

BY JOE COLEMAN.

[Continued from February issue, page 29.]

YOUR Dahlia garden will attract so much attention that many visitors are bound to come, and not to allow your friends to pass among the plants can hardly be avoided. Then it would be best to plant your tubers or plants at least four feet apart each way and if room is no object, four and one-half would still be better. This gives space enough to step carefully between the plants to enjoy the glory of the flowers at close range. Commercial planters, growing for

place just a little soil around or over, and as the plant grows fill around it until the ground is level. The roots are then down where the ground is moist and cool, and another decided advantage to this method of deep planting is the resisting power of the stalk against the heavy gales of summer. We would not lead you to believe that the Dahlia is so tender that it will not stand any hardships whatever, but its naturally brittle stalk should be staked or the plant grown low by the



Cactus and Peony Dahlias.

the tubers and not caring for the bloom, space the rows four feet and the tubers about 18 inches in the row, thus no staking is required as each plant supports the other.

A stout stake, painted green if you like, should be set at time of planting to keep the plants from being broken down by the winds. Another method that we like very well is to pinch out the top of the plant when about ten inches high allowing four shoots to grow, and by so doing, the plant grows but half as tall and little if any staking is required.

Dahlias like a cool soil, so when preparing the ground we scoop out a basin for each plant or tuber and when setting

topping method in case a heavy storm should occur.

The buds form in groups, a terminal and two or three at the sides, and if the largest flowers are desired the side buds should be taken off. This is a matter as to the use the flowers are to be put to, if for exhibition only a few should be allowed to bloom on the plant; if for garden effect disbudding need not be practiced so severely. The flowers should be cut off and not be allowed to fade on the stalk if the maximum amount of bloom is to be had. The single and Collarette varieties need not be disbudded at all as their blooming in clusters presents a very graceful effect.

This Queen of the Autumn must perish with the first heavy frost. If the season has been at all favorable and we have done our part, she has glorified our homes and garden for long six weeks. When the frost has been severe enough to blacken the foliage it is then time to lift the clumps. Cut the stalk a few inches above the ground; not too close, remember, as the eyes oftentimes are up the stalk a little way. To the inexperienced it is well to state that a tuber without an eye is worthless and will not grow. Select a bright day to lift your tubers and allow them to dry in the sun but a few hours. It is best to leave on the dirt that will stick. The clumps will keep better if placed with the stalk down to allow an acid to escape, otherwise the clumps are liable to decay. A cellar with a temperature of 40 to 50° will keep Dahlias satisfactorily; if necessary to store away in a warmer cellar pack in tight barrels and cover tightly. Some of the rarest Cactus Dahlias do not make tubers but only fibrous roots and to keep these it is necessary to place them in sand.

Catalogues and Price Lists.

Paul L. Ward, Hillsdale, Mich. Catalogue of annuals, perennials, Gladioli, Dahlias, etc.

Maine Bulb & Flower Growers, Lewiston, Me. Catalogue of Gladioli, but also includes the Dahlia and other flowers.

Metzner Floral Co., Mountain View, California. Twenty page catalogue of plants, seeds and bulbs with special attention given to the Gladiolus.

A. E. Kunderd, Goshen, Ind. Forty pages of the Kunderd specialties with many beautiful illustrations. The cultural directions, etc., given are of especial value.

John H. Umpleby, Lake View, N. Y. Wholesale list of Gladioli.

B. Hammond Tracy, Wenham, Mass. Pocket size catalogue of Gladioli only, well illustrated.

deGroat & Stewart, Bath, N. Y. Price list of Gladioli only.

Riverbank Gardens, Saxonville, Mass. Complete retail list of Dahlias.

John H. Umpleby, Lake View, N. Y. Retail list of Gladioli.

Those of our readers who are interested in helping THE MODERN GLADIOLUS GROWER to disseminate useful information about the Gladiolus and also to help encourage a love for the beautiful, are requested to send us the names of those who are growing Gladioli even in a small way, or those who might be interested in growing Gladioli, so that we may send them sample copies and solicit their subscriptions.

Gladiolus Growing in Southern Queenstown, Australia.

BY JOHN LANE.

The following notes dealing with the growing of Gladioli in Southern Queensland, where conditions, climatic and otherwise, are so different, to those prevailing in America may be of interest to many of your readers.

The land in which we usually plant our Gladioli was, in its native state, covered with a dense growth of jungle or scrub, as it is termed here. This scrub is felled in our winter season, and after drying for four or five months, is fired, which operation if successful results in everything but the largest logs being burned clean, leaving a heavy coating of white ashes. This in conjunction with the rich humus soil beneath, the result of ages of decaying vegetation, makes an ideal seed-bed.

After waiting for a rain to dissolve the ashes we plant our Gladiolus corms, sometimes by the primitive method of making small holes amongst the stumps and roots. At other times by breaking up beds between the logs, but no matter how crude the method the result is always good and the Gladioli quickly show us by their healthy and vigorous growth that they are very much at home.

When first we came to Queensland we tried to grow Gladioli by the methods employed in England, viz: planting in the early spring and growing one generation in each year. This forced us to hold over the corms long after they had commenced to shoot, and the result was not satisfactory. We then tried leaving the corms in the ground all summer. This resulted in the corms sending out new root systems after every considerable fall of rain. By either of these methods we found the varieties rapidly deteriorated, both in color and form, and size of bloom.

The method we now follow is to grow two generations in each year, planting the corms on the first appearance of the root system starting into activity and lifting the corms about five weeks after flowering, by this system no deterioration takes place except the natural wearing out of the corm.

We find it is of the utmost importance that the corms be lifted as early as possible after flowering and planted again on the first appearance of the root system.

We have found, in this climate at least, that any growth or activity of the corm above ground is very detrimental to the stability of the variety.

CLASSIFIED ADVERTISING.

Growers having surplus stock for sale will find this department effective in disposing of it. Five lines (about forty words) \$1.00 per insertion. Additional lines 15c. each.

PUGET SOUND grown Dahlias, Peonies, Gladioli, Roses and Perennial Plants are the best in the land, owing to the ideal climatic and soil conditions. A genial, moist, temperate climate makes them thrive and bloom here as nowhere else. A trial order will convince you of this fact. Write for catalog. **THE PUDOR FARMS, Puyallup, Wash.**

BULBS—Hyacinths, Tulips, (early and late), Narcissi, Daffodils, Paeonies, Gladioli. Also Spireas and hardy plants. New list now ready. Write us today for your contracts for fall delivery. Van-til Hartman, Bulb Growers, Hillegom, Holland. Care P. C. Kuyper, 10 Broadway, New York City.

"That Modest Price List"—
For your address on a Postal.
F. M. Hine, Waverly, N. Y.

TO INTRODUCE in your vicinity my fifty choice, named Gladioli, such as Panama, Pendleton, Niagara, Dawn, Peace, War, Pink Perfection, etc., I am offering unusually low prices. Send for descriptive price list. **T. H. FULLER, Grower, 649 Marshall St., Battle Creek, Mich.**

GLADIOLUS America, Mrs. Francis King, Pink Beauty, Lily Lehmann, Independence, Brencleyensis at 50c. doz., prepaid.
E. L. HOXIE, Cotuit, Mass.

WM. C. PIKE, Grower of Gladioli, Hardy Bulbs, Vines, Plants, Shrubs, Roots, Tubers of all kinds, both native and imported. Own Root Grown Roses, Rambler and Bush, entirely hardy, field grown stock. Bargain prices until April. Address 18 Summer St., Melrose, Mass.

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Northern
Grown Bulbs
Full of Vigor, Vitality and Blossoms.
We refuse to send out anything but strictly first class bulbs, healthy and true to name.
MIXTURES OF SPECIAL VALUE.
We offer to exchange our catalog for your name and address.
Try us out and see if we are any good.
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HEADQUARTERS FOR
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the florists' white, all sizes; many others.
LONG ISLAND GROWN. WHOLESALE.

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"THE AMERICAN BOTANIST"

Is published for all who are interested in the curious facts about our native wildflowers.

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We specialize in the choice American and French varieties. *Catalogue on request.*

Bath, N. Y.

SPECIAL OFFER

**20 Blooming Size Bulbs and
1 Canna for \$1, prepaid.**

One each America, Augusta, Baron Hulot, Empress of India, Glory, Grace Henry, Ida Van, Jessie, Mrs. F. King, Mrs. F. Pendleton, Niagara, Princes, Peace, Pink Beauty, Rouge Torch, Schwaben, Mrs. Watt, Jean, War, Sulphur Queen. One Canna, Mrs. Alfred Conard.

List free for other prices.

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Flemington - - New Jersey

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Gladiolus Specialists

Hillegom, Holland

Gladiolus---Crystal White

The best white seedling to date for florists' use. A variety which everybody can grow. Good, healthy, vigorous and prolific.

Price for 1st size bulbs 25c. each, \$2.50 per dozen and \$15 per hundred.

Give it a trial.

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New Hyde Park, L. I., - - N. Y.

**Wisconsin Grown Gladiolus Bulbs
Better Than Ever.**

Good mixture, named varieties, 35c. doz.: per 100, \$2.00 postpaid.

50c. Doz., \$2.50 per 100—

AMERICA, HALLEY, MRS. F. KING,
MINNESOTA, BARON HULOT.

\$1.00 Doz., \$5.00 per 100—

WAR, PEACE, NIAGARA, GOLDEN KING.

Dozen, postpaid. Per 100, express collect.

Lincoln Gardens, Eau Claire, Wis.

**Ideal Bulb Planter
& Transplanting Tool**

(Patent applied for.)

Capacity about 2000
bulbs per day.

Works equally well in solid
turf, rocky soil, or clear garden soil.

A GREAT LABOR
SAVER.

Price \$2.00 each.

By parcel post 25 cents extra.

Ideal Bulb Planter Co.

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Write for Particulars.



HILDA

A Beautiful Velvet Red.

**The spikes are not stiff, but
make up in most
artistic form.**

Our introduction in America in 1916 won us the sweepstakes' prize against fifty-four vases in various exhibits last year.

**One dollar for a dozen;
Three dollars for fifty;
Five dollars for one hundred;
delivered.**

Gardens of Avon
523 Securities Building
Des Moines - - - Iowa

Bulblets per 1000 post free:

America	\$.40	Master Wietse	1.50
Augusta	.50	Meadowvale	.50
Baron Hulot	1.00	Mrs. F. King	.40
Brenchlevensis	.60	Pres. Taft	.50
Chicago White	1.00	Prim. Hybrids	1.00
Emp. of India	2.00	Princepine	.70
Evaline	1.00	Schwaben	5.00
Geo. Paul	1.00	Seedl'gs (our own)	1.00
Halley	.60	The King	2.00

250 or more at the 1000 rate.

Bulbs 1 to 1 1/4 in. per 100:

Emp. of India	\$1.50	Princepine	\$1.25
Evaline	1.25	Prim. Hybrids	1.50
Master Wietse	2.00	The King	2.50

Gladiolus seed per packet - 25c.
Primulinus Hybrids seed - 30c.

Brown's Mixed Hybrids

No better anywhere, all colors and shades.
You cannot get these varieties elsewhere.
Large size bulbs \$3.75 per 100 by express.
Small blooming size bulbs \$2.00 per 100.

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WAYSIDE GLADIOLI

ARE KNOWN TO THE TRADE AS
QUALITY BULBS



We grow a selected list of

Dahlias

THAT WILL BLOOM IN THE MIDDLE
WEST and

Hardy Plants

THAT WILL BLOOM ANYWHERE.

May we send our catalog?

Wayside Gardens

Mentor Box G Ohio

Vaughan's Specials in Gladioli



Margaret Beautiful Carmine with white throat.
Per doz., \$1.30; per 100, \$9

Primulinus "Sunbeam" The best and most distinct of all the Primulinus Type.
Per doz., \$2; per 100, \$15

Chicago White The best white for forcing.
Per doz., 35c.; per 100, \$2.25

REMEMBER we can supply strictly first size bulbs for counter trade and, where wanted, medium sized bulbs for mail trade on the above and all other Gladioli.

Write for our 1917 Catalog (out this month) - some Grand Novelties in **Gladioli and Cannas.**

Vaughan's Seed Store

CHICAGO, 31-33 W. Randolph St. NEW YORK, 43 Barclay St.

Gladiolus "Crimson Glow"

A Novelty of Unusual Merit.

Glorious, brilliant, satiny "Crimson Glow," a color that is fetching and pleasing to all. The wide open blooms are of the largest size, well placed on the long, graceful, showy, slender spikes which remain in bloom a long time especially in the cool of autumn. Its petals are of exceptional substance. As a garden type it is extra good. As a cut flower its keeping qualities are the best. Its bulb and plant growth are very good. A free bulblet producer. Small bulbs bloom very well. A free forcer. A gem in every way.

It has been tested in California, Massachusetts, New York, Washington and elsewhere. By actual test it has merited unstinted praise from these critical culturists whose testimonials are of the highest value. We quote from some of them:

"The finest red ever sent out." "One of the very best, if not the best ever seen." From a noted grower in California, "We gave some of the bulbs to our customers, we all agree that it is an extra fine one."

We offer it in a limited way this season for trial.

General introduction 1918.

Try this unusual variety—unlike all others.

\$1.00 ea., \$10.00 per doz.—post free—cash.

Our trial collection embraces all the best from
all growers worldwide.

The finest Gladioli—Cannas—Dahlias—Peonies—extant.

C. Betscher, Plant Breeder

Fertile Acres Farms

Dover, Ohio

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U. S. A.

WILLIS E. FRYER

Hardy Plant and Gladiolus Specialist.

PHLOX OF MY OWN PRODUCTION:

AMELIA, crimson center fading to nearly white on outside of petals. ANNA, large white with red eye. CURIOSITY, in one dozen plants there are no two just alike. MRS. MELLINGER, rosy red, the best drouth resister in my collection. MRS. W. E. FRYER, one of the best white phlox that I have ever tested. MRS. K. ANDRIST, the nearest approach to blue that I have ever seen. REV. N. E. SPICER, the ideal pink. Many who have seen it in bloom pronounce it one of the best pink phlox that they have ever seen.

Strong plants of the above 30c. each.

GLADIOLI. Words of praise for the Gladiolus Mrs. W. E. Fryer:

Los Angeles, Calif.

Dear Mr. Fryer:—The bulbs of the gladiolus, Mrs. W. E. Fryer, about which you wrote me, were a surprise to me when in bloom. I think it one of the finest varieties yet produced in the gladiolus line. Yours very truly, W. J. Colcleugh.

Prices—No. 1, \$1.50 per doz.; No. 2, \$1.25 per doz.; No. 3, \$1.00 per doz.

KATHRYN FRYER, dark velvety maroon. The darkest that I have ever seen, \$1.00 each. MANTORVILLE, a yellow ruffled gladiolus. Some of the flowers are pure yellow while others are tinted pink, 25c. each. Gladiolus bulbs sent prepaid.

DELPHINIUM—My hybrids; hardly two alike. \$1.50 per doz. Strong plants, \$2.50 per doz.
SIBERIAN IRIS—GRANDIS, violet; reticulated white. 20c. ea., \$2.00 per doz. LADY GODIVA, blush-white, flushed rose. One of the earliest; distinct, 25c. ea., \$2.50 per doz. SUPERBA, large, violet-blue; handsome foliage reaching almost to the flowers. 20c. ea., \$2.00 per doz. SNOW QUEEN, large ivory-white flowers. Extra. 20c. ea., \$2.00 per doz.

BEARDLESS IRIS—LORD WOLSELEY. One of the best. 25c. ea. SEEDLING BEARDLESS, \$1.00 per doz. All Iris are strong plants.

BOTH WHOLESALE AND RETAIL—WRITE FOR CATALOG.

Mantorville - - - - Minn.

WOODRUFF'S GLADIOLI

Hardly need introduction to most of you. They took first premium at the great Iowa State Fair and "Independence" Gladioli have taken first and second premiums and many specials every year since 1907. Satisfied customers all over the country testify to their excellence and fair price. Here are some offers:—

One each for 50c.—

America, Mrs. Francis King, Burrell, Princes, Scarsdale, Velvet King, Queenly, Peace, Pink Perfection, Glory of Holland, Annie Wigman.

One each for \$1.00—

Golden King, Baron Hulot, Eldorado, Independence, Liebesfeuer, Halley, Loveliness, Niagara, Mrs. Beecher, Mrs. Pendleton, Lily Lehman, Schwaben, Pink Beauty, Princepine, Queen Wilhelmina, Willy Wigman; two each Primulinus Hybrids and Blue Seedlings.

These will be all good flowering size and postpaid, each sort labeled.

One hundred Oakwood Mixture, finest sorts for \$1.00 postpaid except in 6th and 7th Zones, for which add 20c. and 25c.

Send for catalogue now in preparation. It will interest you.

Geo. S. Woodruff, Independence, Iowa

GIANT GLADIOLUS

You have all often read of Giant Gladiolus with flowers 7 inches, and more, across and spikes from 5 to 8 feet tall.

While not all varieties can be grown to very great size, it is nevertheless surprising to what extent many kinds can be developed by following certain special forcing cultural methods. In our 1917 catalog we have given special cultural instructions, such as are not often available to the general public, and which, if carefully followed, will give surprising results.

We will gladly send you a free copy of our catalog for a postal card request, and we don't want you to feel in the least obligated on that account to give us any order whatever.

Address

A. E. Kunderd

Goshen, Ind, U. S. A.



"CRINKLES"
"KUNDERDI" TYPE

PRINCE OF WALES

Beautiful dark salmon pink, shaded silvery white. Large flower with seven or eight well expanded blooms open at a time. Considered an improvement on Halley, and a large demand for this variety is expected as soon as its merits become known.

Bulbs 1/2 to 1 in. 60c. per Doz., \$3.50 per Hundred.

CLEAR EYE—New, tall, early robust grower, with large spikes and broad, dark green foliage. Deep scarlet with white center. Flowers broad and of fine form. **\$3 per doz.**

PINK PROGRESSION—Sport of "Pink Beauty." Very early light rose color; rapid multiplier; of great merit for forcing. **\$1 per doz., \$5.00 per hundred.**

PEARL—A beautiful pink with creamy blotch. An extra tall and straight grower (new). **\$2.50 per doz. \$15 per hundred.**

PARLIAMENT—Bright red with white blotch, as many as 10 large open blooms at a time. Very strong grower. **\$1.50 per doz.**

PRICES BY THE DOZEN ARE BY MAIL PREPAID. BY THE HUNDRED BY EXPRESS.

JOHN ZEESTRATEN

60 Washburn Ave.

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GLADIOLI--Named Sorts

	<i>Per doz.</i>	<i>Per 100</i>		<i>Per doz.</i>	<i>Per 100</i>
	<i>post paid f.o.b. here</i>			<i>post paid f.o.b. here</i>	
America, soft pink .....	.50	\$1.50	Loveliness, cream apricot	\$1.00	\$5.00
Augusta, white sh'd heliotrope .....	.50	1.50	Mrs. F. Pendleton, Jr.	1.50	7.00
Baron Hulot, dark violet .....	.50	1.50	Panama, deep pink .....	.75	5.00
Brenchleyensis, verm'l scarlet .....	.50	1.50	Peace, white, red blotch	1.00	5.00
Chicago, white early .....	.60	2.00	Pink Perfection, fine pink	1.00	6.00
Empress of India, dark maroon .....	.75	2.50	Rochester White, pure white	1.00	6.00
Europa, snow white	1.00	5.00	Schwaben, pale yellow	1.00	6.00
Glory of Holland, white .....	.75	5.00	Brunswick Mixture .....	.40	1.00
Halley, large salmon .....	.50	1.50	Groffs Hybrid Mixture .....	.50	1.50
Lily Lehman, white rosy tinge .....	.75	5.00			

At Dozen price, POST PAID. At Hundred price, F. O. B. HERE. Twenty-five (25) Bulbs of a kind at the hundred rate where not less than 100 bulbs are ordered. 6 Bulbs at dozen rate.

SPECIAL OFFER—To introduce my Gladioli I will send one each of the 17 named varieties as above and 3 Groffs Hybrids, 20 bulbs in all, blooming size, the lot for only \$1.00, post paid.

SWEET PEA SEED—Very Choice mixtures

Winter Orchid, mixed per oz.	35c.	All Kinds Fine, Mixed per oz.	15c.
Early Winter, Mixed per oz.	35c.	Zvolanek's Gold Medal, Mixed per pkt.	25c.
Spencer Extra Choice Mixed per oz.	25c.	The Five (5) Papers for \$1 post paid.	

AMARYLLIS (Hippeastrum)—The most beautiful and gorgeous of all the bulbous plants. With their brilliant colors, gigantic size, there is no other flower that will make a grander show than the Amaryllis. With their three to five large six to nine inch flowers on each scape. My stock has been crossbred until it is now beyond doubt as fine as can be produced. Bulbs 50c. each, \$5.00 per dozen; for Mixed Unbloomed Seedlings. Bloomed and Selected Fancy Stock \$1.00 each, \$10.00 per dozen.

PANSY PLANTS—Large flowering. None better. 12 for 40c; 36 for 50c; 100 for \$2.00; 300 for \$5.00, postpaid. One ounce of choice Sweet Pea seed free with each dollar's worth.

— I HAVE NO CATALOG —

C. S. TAIT

- Brunswick, Georgia

Wanted to Buy Gladioli

- 25,000 America 1 $\frac{1}{4}$ inch.
 25,000 Augusta 1 $\frac{1}{4}$ inch.
 50,000 Mrs. Francis King
 1 $\frac{1}{4}$ inch.
 25,000 Mrs. Francis King
 1 $\frac{1}{2}$ inch.
 50,000 Mixed 1 $\frac{1}{2}$ inch.
 50,000 " 1 $\frac{1}{4}$ inch.
 50,000 " 1 inch.

Also want prices on all leading varieties in all sizes.

Address "Buyer"

Care, The Modern Gladiolus Grower
 Calcium, N.Y.

Special Offer--

Mrs. L. Merton Gage

Glistening white, with an occasional suffusion of delicate pink; lower petals bear a dainty striping of rose pink. Anthers purplish blue. Flowers of good size and graceful form. Spike straight and strong; blooms early. One of the best of the whites. Awarded a First Class Certificate of Merit by the Worcester Co. Horticultural Society, Worcester, Mass., Aug. 12, 1915.

25c. each, \$2.50 per dozen.

Although "Mrs. L. Merton Gage" is not a solid white gladiolus, I believe it to be the best white gladiolus that is offered to date, and wishing to give every reader of this advertisement an opportunity to try this beautiful variety in comparison with other white sorts, I will make you the following offer for the next 30 days—

Six full-size bulbs of above variety for \$1.00 post-paid.

Sunnyside Gladiolus Gardens

L. Merton Gage, Prop'r.

Natick - - - Massachusetts

Headquarters for

Gladiolus "Mrs. Watt"

Brilliant Wine—One Color

(See February issue *The Modern Gladiolus Grower* for full description.)

Strong Blooming Bulbs, - - \$1.00 per Dozen, Postpaid

Letter from a Boston florist who has used "Mrs. Watt" for three seasons:

To MR. HOMER F. CHASE, Wilton, N. H.

Boston, January 9th, 1917

Dear Sir:—Just a word of appreciation of Gladiolus "Mrs. Watt," with which we had such success last season.

My reason for writing you is because I think it would be advisable for you to plant a greater quantity of bulbs of this particular variety for next season as they have proven one of the best sellers with us.

It has a wonderful color, and lasts, it seems to us, much longer than some of the other so-called good keeping varieties, and will undoubtedly be in greater demand next season.

Very respectfully yours,

(Signed) PENN THE FLORIST, by Henry Penn.

One-half dozen each of the following for \$2.00, postpaid:

"Mrs. Watt," Myrtle, Maize (corn color), Rouge Torch (delicate pink, cream and white, torch shaped spot rouge in throat), Ida Van, Sulphur Queen (soft shade lemon yellow no spot in throat), Peace.

1 ISSUE NO RETAIL CATALOGUE.

Prices planting stock "Mrs. Watt" to growers on application.

Homer F. Chase

Wilton

- - -

New Hampshire

Myrtle The Perfect Pink Gladiolus
Blossoms in the lovely tints of the trailing arbutus. Rare and beautiful as a pink pearl. See January number for full description.

Strong Bulbs 20c. each, \$2.00 per dozen.

Lily White Snow White and Lily Pure
A white of delightful vigor and spotless purity. Will succeed anywhere. See February number for full description.

Strong Bulbs 50c. each, \$5.00 per dozen.

Is Pink your favorite color ? A garden of beautiful pink Gladioli from palest pink to deep rose, lovely and tasteful. 3 each of choicest eight varieties: America, palest pink; Taconic, silvery pink; Mrs. Pendleton, blush pink; Pink Perfection, apple blossom; Pink Beauty, peach pink; Panama, rose pink; Independence, coral pink; Halley, salmon pink. **All for \$1.00.**

You surely must try these. They are exquisitely dainty.

MY NEW BOOKLET IS "DIFFERENT" WANT ONE?

H. E. MEADER, Gladiolus Specialist.

Dover - - - - New Hampshire

WE GROW

ALL OF THE STANDARD
VARIETIES OF THE

Gladiolus

and assure you that every thing that we offer is grown right here on our own place, and guarantee all bulbs to be free from disease.

In Addition

to Gladioli we grow a very complete line of Dahlias, Cannas, Tigridias, Montbretias, and other bulbs and plants for the spring season.

Ask Us

before placing your spring order. You'll not regret it.

The Grinnell Nursery

Grinnell - - - - Iowa

E. E. STEWART

Wholesale Grower of
GLADIOLI

List of 85 varieties.

Brooklyn - - Mich.

GIANT NEW GLADIOLI

IT IS NEEDLESS to comment on the success of the Austin originations. These varieties have been developed with the firm belief that the tallest and most graceful Gladioli in existence has been produced. You will not have the *best* in Gladioli until you grow them. A magnificent collection of eight sorts is now offered the public.



EVELYN KIRTLAND

Note Illustration measuring length of spike with yardstick.

new touch of color was added to our gardens last a brilliant mauve that is sure to become popular." *The Garden Magazine.*

"Evelyn Kirtland is the most magnificent Gladiolus I have ever seen and I have seen most all there are."—*Wilbur A. Christy, Secretary-Treasurer Gladiolus Society of Ohio.*

Send for **WHOLESALE** or **RETAIL** List.

Have Schwaben, Mrs. Pendleton, Pink Perfection, Mrs. W. E. Fryer, Golden King and all the rest.

"Home of Elm Hill Gladioli"

Austin-Coleman Co.

Wayland

- - - -

Ohio

EVELYN KIRTLAND—Strong substance, beautiful shade of rosy pink, darker at the edges, fading to shell pink; brilliant scarlet blotches on lower petals. Entire flower showing glistening, sparkling luster.

GRETCHEN ZANG—Most beautiful soft, melting shade of pink blending into scarlet on lower petals.

HERADA—Immense size on tall spikes. A startling novelty of pure mauve, glistening and clear.

WAMBA—Enormous blooms of deep salmon. No collection complete without it.

CARDISUN—A large bloom, dark velvety red with nearly black throat.

BERTREX—A sterling white of great substance; winner silver cup for best seedling.

ROSE WELLS—Large, wide open blooms; light rose, clear color, small attractive blotch of lilac rose and yellowish green.

ORIOLE—A sterling light yellow with deeper throat.

This collection has won 12 prizes including Silver Cups.

One bulb each entire collection \$2.50; 3 collections \$7. Pre-paid. Orders filled in rotation.

"America has recently added to our wealth in important Gladiolus two pink beauties that have been named Evelyn Kirtland and Gretchen Zang. * * * A summer by the introduction of Herada, *Montague Chamberlain, in August issue*

The Wilmore Floral Co.

(Successors to W. W. Wilmore, Jr.)

Wheatridge, Denver, Colorado

Gladiolus Specialists

Growers of Bulbs and Plants

Awarded Gold Medal at Panama-Pacific International Exposition for the best display of seedling Dahlias, and Bronze Medal on display of Gladioli.

OUR NEW CATALOGUE NOW READY. SEND FOR IT.

You want something NEW and FINE ?

—ask then quotations for our
new (special blue)

GLADIOLI

WHOLESALE PRICE LIST FOR 1917 FREE ON APPLICATION.

APPLY TO OUR AMERICAN REPRESENTATIVE

MR. TH. A. de GROOT,
c/o R. F. Lang, 8/10 Bridge Street
NEW YORK

K. VELTHUYS,

Hillegom - - - Holland

Meehan's Mallow Marvels

These absolutely hardy perennials, originated by us, are of such surpassing beauty that they are considered the sensation of the plant world today.

From mid-summer until frost, when the sturdy 5-foot bushes are covered with the big gorgeous blossoms, the effect is really dazzling.

Even a single specimen, while in bloom, is the most conspicuously beautiful feature of the lawn or yard, and, used in masses, they dominate the entire grounds. No flower lover can afford to be without them. Order NOW.

Strong 2-year roots, Pink or White, 50c. each; 5 for \$2. Red, 75c.; 5 for \$3. Mixed colors, 35c.; 5 for \$1.50.

Write for our 1917 Hand Book TODAY.

It describes in detail hundreds of specially choice, well grown trees, shrubs, and hardy flowering plants, and tells how to grow them. Mailed FREE.

Thomas Meehan & Sons

6728 Chew St., Germantown,

Philadelphia, Pa.

METZNER'S Grand Prize Strain Gladioli

Our Prize Winners at the Panama-Pacific International Exposition, San Francisco, Cal., 1915

"Capt. Asher Carter Baker" (Silver Medal)

Flowers 4½ in. diam. Spikes 4 ft. tall. Bright Scarlet. Strong bulbs \$1.00 each.

"Dr. Frederick J. V. Skiff" (Gold Medal)

Flowers 5½ in. diam. Spikes 5 to 6 ft. tall. Delicate Rose Pink. Strong bulbs \$1.50 ea.

"Polar Star" (Gold Medal)

Flowers 5 in. diam. Spikes 5 to 6 ft. tall. Milk White. Strong bulbs \$2.00 each.

WE PREPAY CHARGES IN U. S.

Write for our 1917 Catalogue.

Metzner Floral Co.
Mountain View - California

YOUELL'S Ne Plus Ultra Mixture

is made up from named varieties of various colors (except blue) and is recommended with the greatest confidence. It will especially appeal to those who want a variety of the choice flowers without the trouble of making a selection.

**Price, per doz., postpaid, 60c
per hundred, by express
collect, \$4.00**

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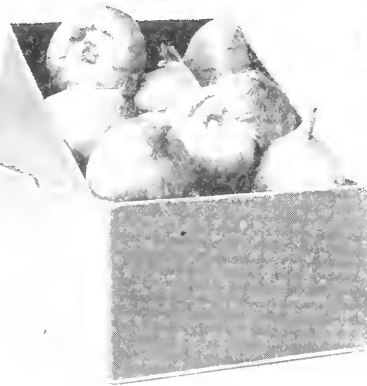
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Light flesh pink like "Panama" but larger; produces up to 130 flowers to the bulb. Flowers 6 inches in diameter; stems 6 feet high. All bulbets or corms will produce flower spikes five months after planting. Very rapid propagator. (Our Own production.)

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FOR BOTH AMATEURS AND PROFESSIONALS.
Published Monthly by Madison Cooper, Calcium, New York.

Vol. IV.

APRIL, 1917

No. 4

GLADIOLUS—
NORMA DEE
CHILDS.

Extra large flower and spike. Delicate white in color, softly penciled with rose and with a large sulphur-yellow throat.



One of the John Lewis Childs specialties, originated and introduced by him some years ago and named for his daughter. A very beautiful and distinctive variety, but like many other white varieties not of very strong growth.

The Gladiolus Manual.

BY W. W. WILMORE, JR.

CHAPTER XVIII.

The Gladiolus a Hobby and How to Obtain a Good Collection.

WORK that becomes play is a hobby. The diversity in the lives of men causes some to take pleasure in the lines of work that others depend upon for livelihood. Some men pay for the privilege of doing things that others are hired to do. The professional Gladiolus grower is glad to see the end of a day's toil that he may divert his attention to something else, while others hasten home from their varied lines of endeavor to work with the Gladiolus which is in most cases more interesting to them than their business. Some men do not have hobbies, while others turn their attention as a hobby to lines vastly different from flowers.

Many cases have developed where a hobby has become a profession and such have become great successes for the reason that the man with a hobby is infatuated with the subject and wrapped up in it heart and soul. Some of our most prominent Gladiolus growers and introducers have taken up the business in this way.

To encourage the amateur and develop a greater interest in the growing of Gladioli, many summer shows have been organized. Some are developed from a professional standpoint, but the most of them are to give the amateur a chance to display his product and to bring before the public new varieties and recent introductions.

Prizes have been offered to get exhibitors to display their different varieties and often the exhibitor spends dollars in order to receive a prize worth a few cents, which may be of more sentimental value to him than if he were paid double the amount of its cost. We are proud to show a Medal, Blue Ribbon, Certificate of Award or a like trophy for our labor. This, however, is not the only good we derive from these shows. We see the new varieties and introductions of others. We get new ideas for breeding. We can better our collections by discarding some inferior variety for the new one which is somewhat similar but much better. We find a new color that we do not have in our collection. This we must get next season, perhaps we are able to trade or sell some of our own stock which some other exhibitor is eager to obtain. All these

things are essential for the Gladiolus fancier in order to obtain a good collection. He must always be ready to dispose of inferior varieties and eager to grasp better ones.

When competing for prizes at flower shows you must first consider the time to plant and the varieties you are exhibiting. We must always consider that some varieties bloom quicker than others and, therefore, in order to get a late and early variety to bloom at the same time, the late one should be planted first. There have been several charts made of the time for certain varieties to bloom but even these cannot be depended upon for several reasons. First, the size and age of the corm have to be considered, an old corm will bloom before a younger corm of the same size. Second, weather conditions will make a great difference in the time of blooming. Third, location will change the time of flowering. So we must, therefore, use a more comprehensive method for getting our display into bloom at the proper time; one or two days' late may mean a total failure. Therefore, I would suggest that the best way to do would be to plant at intervals after a close calculation of the proper time, planting the first lot a few days early, the second lot at as near the proper time as can be figured and the last planting a few days later than the second planting. Then should the season be a little off, one could almost count on being able to make a good exhibit. I would say, however, that it is seldom that the crop comes in too early but often too late. In certain cases where the flower stock is apt to be one or two days past its best at time of judging on exhibition the life can be lengthened by cutting when first buds begin to open and placing in a cool cellar. This will add one or two days to the life of the flower.

It is always advisable to cut the spike as soon as the first bud begins to open so as not to bruise the flowers, but it should not be placed in the dark unless to hold it back.

In cases where exhibitors have a large number of each variety to draw from these precautions are not necessary, but where small quantities are grown as is

the case with most amateurs too much advice cannot be given.

In making entries go after all that you can, the other fellow hasn't got you beaten until the judge puts his stamp on the exhibit. If we would keep this in mind our shows would be a greater success. We would have a larger display and it would be educational and even though we fall down this time we may learn of our mistake and win next. If possible attend to your own exhibit. Change the water each morning and remove a small portion of the stalk. If any of the flowers fade, remove them also and keep the exhibit in a fresh state. All these count especially when being judged.

Another thing, don't be discouraged if you should not happen to take the prize you want and above all things, don't censure the judge, even though his judgment should be misplaced. He is in a hard position and the fact that all persons do not see things in the same light, warrants judgment accordingly. Act in accordance with the rules of the show, and try to make it a grand success, and better than the previous one.

We do not have enough of flower shows in America to stimulate a proper interest, and our people as a rule do not love flowers as they should, and do not grow nearly enough of them. Therefore, it will be a long time before this can be overdone.

"The smiles of God are the roses fair
Their fragrance scents the air
They fade and die, as it were a sigh
For those who do not care."

Planting and Blooming

Schedule for 1916.

This last season I planted a block of numerous varieties under conditions that afforded an admirable opportunity to test their relative time between the day upon which the bulbs were put under the ground and the day that the first blossom opened. All these bulbs were planted on the same day and in the same kind of soil, with similar conditions of sunshine and water.

There were none of the *Primulinus Hybrids* in this block, but some of these bulbs that I put into a rather wet, black soil bloomed within a very short period. They were planted on June 29 and the first blossom opened on August 16, and I am wondering if this record of 48 days is not ahead of any other made in this country?

The schedule of days from date of planting to blooming follows:

Pink Beauty	55	Baltimore	80
Halley	60	Sans Pareil	80
Daisy Rand	65	Negerfurst	80
Myrtle	65	Niagara	81
Primulinus	66	Eugene Sandow	81
La Prophetesse	67	Florence	81
Prince of Wales	67	Mephisto	81
Premiere	67	Navajo	81
Candidum	68	Mrs. Fryer	81
Princess of Orange	68	May	81
Comanche	69	Shasta	81
Empress of India	70	America	81
Princepine	70	Michigan	81
Shakespeare	71	Mrs. Beecher	81
Bertrex	71	Schwaben	82
Meadowvale	71	Canary Bird	82
Lily Lehmann	71	Mrs. Moulton	82
Mrs. Lancashire	73	Baron Hulot	82
George Paul	73	Baron Staff	82
Cherry King	73	Madame Monneret	82
Rose Wells	74	Le Triomphe	82
Rouge Torche	74	Dawn (Tracy's)	82
Annie Wigman	74	Panama	82
Red Amarillas	74	Taconic	82
Mary Fennell	74	Wild Rose	82
Aristophane	74	Cherokee	83
Bluvista	75	Mrs. Pendleton	83
Glory of Noordwijk	75	Glory of Holland	83
Jane Dieulafoy	75	Alice Chamberlain	83
Chicago White	75	Parure	83
Dick	75	I. S. Hendrickson	83
Sandersoni	75	Orange Glory	84
Ida Van	75	Corsaire	84
Lady Janet	76	Jessie Palmer	84
Mrs. Dr. Norton	76	Rajah	84
Cardinal King	76	Pink Perfection	84
Meteor	76	Mongolian	85
Herada	77	White Lady	85
Clarice	77	Gretchen Zang	85
Scarsdale	77	Glory	85
Mrs. Francis King	77	Autumn Queen	86
Brenchleyensis	77	Lillian Morrisey	87
Mrs. Chamberlain	78	Rosy Spray	87
Rose Bud	78	Enchantress	87
Easter Bells	79	Rochester White	87
Loveliness	79	Reine Blanche	87
Desdemona	79	Mrs. Watt	88
Berlinia	79	Hollandia	88
Dawnray	79	Sulphur King	88
Mary Bancroft	79	Cameo	89
Faerie	79	Independence	89
Nezinscott	79	Patrician	89
Mephistopheles	79	Summer Beauty	90
Princes	79	Peace	91
Tavistock	79	Zeppelin	94
Spring Song	80	Europa	94
White Glory	80	Mrs. Kunderd	97
Rosella	80		

MONTAGUE CHAMBERLAIN.

Note by the Editor—

Note what Mr. Chamberlain says about having *Primulinus Hybrids* bloom in 48 days from time of planting. Can anyone show a better record, or has anyone a record showing bloom in so short a time? It should be remembered that the season of 1916, especially the months of July and August, were exceptionally warm, and at Mr. Chamberlain's place in Eastern Massachusetts we understand that plentiful rains fell during this period.

Have you secured Gladiolus seed for planting this spring? You will be well repaid and it is not yet too late.

Planting for Color Effects in the Garden.

The most attractive flower bed in my garden this year has been the one planted for a blue and white effect. From earliest spring, soon after the snow had gone, until now, October 4th, there has been something interesting and beautiful blooming there.

In the middle of the summer it was one tangled mass of lilies, delphinium, phlox and gypsophila, their perfume filling the whole garden. As the lilies faded and the delphinium grew old and went to seed, the old stalks were cut away. The phlox and delphinium bloomed again in a little while, and in September the candidum lilies began to come through the ground, getting ready for next year.

The bed is three feet wide by thirty long, and was covered last winter with loose straw and leaves, with a few corn-stalks to hold them in place. Early in April this was raked off and the edges of the bed made straight, for the grass always grows in a little each year. The warm sunshine soon brought out the scilla and crocus, almost carpeting the whole bed. One would not think of the other things hiding under their leaves.

The forget-me-nots began to look green along the edge, and up through the fading crocus and scilla came a few straggling grape hyacinths, blue and white, and one lonely plant of the Virginia cowslip (*Mertensia*)—more could have been used with good effect, for they, too, disappear after awhile.

The Virginia cowslip staid in bloom until the forget-me-nots were a mass of blooms, and the blue Darwin tulips (pink, really, with a blue spot in the bottom of the cup, just back of them) were in all their glory. In the middle of the bed the Madonna lilies, and belladonna delphinium had covered the ground with green. In spots the wild violets were in blossom—they had crept in some way from the dirt—I think it had been taken from the woods near by.

Watching each day, for the friends I knew would soon be coming, I found the first shoots of the hardy phlox, which I knew to be *G. Von Losburg* and *Miss Lingard*. Double blue bachelor buttons, self sown, were there, some transplanted to fill in the bare spots, and poppies; I didn't know what color they would be, for the wind and the birds had sown the seed; but the leaves were a beautiful grey-green, and I let them grow. I had almost given up the double baby breath (*Gypsophila paniculata*, fl. pl.), but finally

it came all the way down the bed, about every five or six feet, between the delphinium and the phlox. There were perhaps a dozen plants of phlox, a dozen of belladonna delphinium and six baby breath through the middle of the bed, and on each side a row of the intense blue Chinese delphinium.

Just outside these, and next to the forget-me-nots and tulips, are the bachelor buttons, and, coming through it all, a hundred candidum lilies, their waxy white blossoms glistening in the sunshine, and the perfume so heavy you knew they were there long before you could see them. The poppies, too, were there; they were double, like a peony, rose-pink with a white edge. I was glad I let them grow, for I don't think I ever saw a more beautiful sight.

I let it all grow and bloom as long as it would, hating to touch it for fear of spoiling all. Finally I was obliged to clear away the old stalks, and it looked rather bare for a time. But I brought some white asters from the reserve garden. The *Baron Hulot* Gladioli were soon in bloom. The phlox sent up tiny shoots for new bloom from the base of each leaf, and the second crop of bachelor buttons came along. White schizanthus along the edge, covered up the old forget-me-nots, and funkia lilies (*subcordata*) threw up their buds. The delphinium all began to bloom again, the grey-green leaves of the baby breath were still there, and soon my bed was all abloom again and staid so the rest of the summer.

But never did it equal the glory of those first ten days of July.—MRS. H. B. TILLOTSON, Minneapolis, before Minnesota State Horticultural Society.

Planting Gladioli.

There is a great variation in planting directions for Gladioli, but this does not mean that some of them are absolutely wrong and others absolutely right. The Gladiolus is rather flexible in its requirements and will adapt itself to most any conditions. Planting in a double row by opening of a flat bottom hoe trench about six inches wide, and planting a row on each side of the trench, is a good way to do it on a small scale and where space is limited. A single row is probably better but more wasteful of space and labor. Whether planted in a single or double row there should be a space of about twenty-four to thirty inches between the rows. It is necessary to have at least twenty-four inches to give space for cutting flowers and cultivating.

MRS. AUSTIN'S TALKS.

BIRDS AND BULBS.

With the coming of spring we are again spending a part of our time at Elm Hill watching the nest-building of the birds which, in some respects, is quite similar to Gladiolus growing. We observe that there appear to be professionals and amateurs among the nest builders and that they have their troubles and vexations the same as Gladiolus growers.

The robin that has been the proprietor of a home in the cornice of the house for several seasons goes about his work methodically, apparently wasting no time and making few mistakes. He selects the right material and puts it in the place where just such material is needed and unites it with mud-glue that he has manipulated until it is of the proper consistency to cement firmly. He lines the inner side with soft cushiony material and in keeping abreast with the times is quite apt to use your prettiest tatted collar which you may be giving a spring bleaching on the grass. He wisely lurches any time that he sees a tempting bug or wriggling worm, and does not work to exhaustion, all of which goes to show that he is a professional, has had experience and that the building of the new nest does not look, to him, like moving a mountain.

But what about that pair of "newly-weds" just hatched last year? Perhaps they took a short winter course in building and think they know all about it but they made mistakes straight from the beginning. The little bride's tastes were domestic and she insisted on building her pretty bungalow in the crotch of the lilac tree where she could peep through the window at little Miss Catherine as she washed dishes. They were a long time building it. Many times the sticks or grasses could not be connected nicely and the little amateurs threw them out, brought others and tried again. The nest completed was a work of art, and rocking gently in the breeze she felt herself to be the envy of the neighborhood. While busily making plans for the future she heard a silvery voice and found herself looking straight into two big yellow eyes, so shining and fascinating that for a brief instant she remained perfectly motionless, but instinct told her it would be death to remain and as she fluttered away barely out of reach she saw the stealthy paw reach into her beautiful nest, unsheath the terrible claws, crush the egg

she had deposited and in a twinkling destroy the home she and her mate had so carefully constructed. To the cornice she quickly flew and there Grandfather Robin told her the story of the cruel *cat*. How he had heard it estimated that thirty-one million of their bird relatives had been cruelly tortured and destroyed in one season and that there was said to be twenty-five million of those terrible murderers allowed to roam at will in the United States. That farm crops and products to the value of one billion dollars were annually destroyed by insects that would have been eaten by birds if they could have lived, and yet people made no effort to save the lives or furnish nesting places for the birds. "There are few houses built with cornices finished convenient for nesting," said Robin, regretfully.

"Perhaps it would be safer to build your next nest away from the house and nearer the woods, choosing a little higher place, a trifle more under cover, and making it a little stronger, thus preparing for violent winds, heavy rains, as well as other dangers."

And so it is with the Gladiolus growers. Those inexperienced in the business know that it is the little things done well, and at the right time, that save trouble, time and expense and make the end successful. "I want to grow Gladioli but know nothing about them except that I love them," is a common remark. Of course, the first thing to do to grow anything well is to prepare the soil properly. This may be done now but would have been better to have been begun in the fall. If nothing has been done to the plot, cover it with barnyard manure, plow and harrow and roll it, and harrow and roll again making it as fine as possible. Tiny roots require *soft, mellow soil* to do their best in. If unable to get enough manure to give a heavy coating, use a good commercial fertilizer such as is recommended for potatoes. For planting, grade the bulbs into three lots. Those measuring $1\frac{1}{2}$ inch and up in diameter, 1 inch to $1\frac{1}{2}$ and $\frac{1}{2}$ to 1 inch, those that measure $\frac{1}{4}$ to $\frac{1}{2}$ inch are the small ones grown from bulblets last year and are often spoken of as white skinned bulblets. If the plot allotted to Gladioli is large enough they can be given easier and better cultivation if planted in rows. The black bulblets should be planted first because they are slow in starting into growth requiring more moisture to soften the hard shells or covering. And it is well for them to get an early growth so they may be dug before the harvesting of the larger bulbs

in the fall. They come up better if planted thickly and there is less room for weeds.

If weather is still cool and ground seems cold, plant the large size in drills 4 to 6 inches deep. First, scatter them along the rows, then see that they are right side up and about twice the diameter of the bulb apart, cover lightly to allow the warmth of the sun to reach the bulb and as they start into growth fill the drills.

Next, plant the lot measuring $\frac{1}{2}$ to 1 inch, and as many in this will give good salable spikes, it will save steps to have them adjoining the larger ones.

MRS. A. H. AUSTIN.

"The Best" Varieties.

An article by Mr. Henry Youell in *Florists' Exchange* and reprinted in THE MODERN GLADIOLUS GROWER for November, gives a list of the "best twelve Gladioli for commercial purposes."

This is always an interesting topic as no two growers will ever exactly agree in regard to it, and it is also a very practical one because every buyer wishes to choose the varieties which will give best returns.

If I were buying stock now for a purely commercial cut flower business to give immediate profit on the investment, I should omit from Mr. Youell's list *Pendleton* and *Pride of Goshen*, as being too scarce and expensive, *The King*, on account of its peculiar color and scarcity of stock, and *Princeps*, which in my experience is not a good shipper and opens only one or two flowers at a time.

No doubt markets vary and anyone wishing to ship to a certain point should first consider what is demanded by the flower trade of that vicinity. It is not safe to trust one's own preferences in this business, and it is of no use to add to the list varieties which cannot be readily purchased in blooming sizes in two to ten thousand lots.

The Boston market will take only a limited quantity of such colors as blue, lavender, purple, maroon and old rose. Light shades, good white, cream, pink and yellow stock is always in demand. Nice clear reds to a lesser degree, while mixed and fancy shades are hard to move except at low prices.

My choice of "best ten," which can be obtained at reasonable prices for immediate results, would be as follows: *Pink, America, Panama, Halley, Taconic, White, Chicago White, Glory of Holland (Albion), Cream, Niagara, Glory.* Red, *Mrs. Francis King, Independence.*

A large per cent of the planting should be *America* with *Halley* and *Chicago White* for early, and *Mrs. Francis King* and *Independence* for late blooms. If dark red is wanted use *Crackerjack* or *Geo. Paul.*

Now let me give another "best ten" which will be likely to start an argument: If I were beginning now to work up stock for a cut flower business in 1920, I would buy for propagating, an entirely different list. *Pink, Mrs. Frank Pendleton, Pink Perfection, White, Peace, Europa, Yellow, Schwaben, Golden King, Red, Liebesfeuer, War, Mauve, Herada, Scarsdale.*

I am well aware that I have nothing in the above list to take the places of *America* and *Mrs. Francis King*, and it may be that these very popular and useful varieties will hold their places in the procession for some years, but with these exceptions the list shows the great advances we are making and what may be expected in the near future.

I could easily go a step further and name ten new ones, as yet scarcely mentioned in price lists, which give great promise of surpassing in their turn most of those in my second list.

S. E. SPENCER.

Metzner Floral Company's Panama-Pacific Awards.

The Metzner Floral Co. of Mountain View, California, write us that they have received the 12 medals covering their general growing floral exhibit at the Panama-Pacific International Exposition at San Francisco in 1915. Four of these awards were for Gladioli as follows:

The Grand Prize (the highest testimonial) for Seedling Gladioli, Growing Exhibit.

Gold Medal for named variety, *Dr. Frederick J. V. Skiff.*

Gold Medal for named variety, *Polar Star.*

Silver Medal for named variety, *Capt. Asher Carter Baker.*

The three varieties above mentioned are owned and for sale by the Metzner Floral Co. They form a part of what has been designated as the Panama-Pacific International Exposition Grand Prize Strain of Gladioli.

Gladiolus growers are offering some wonderful things in the way of collections and mixtures. This is a very cheap way to secure some of the very best varieties. Also, there are offered some beautiful varieties like *Mrs. Dr. Norton, Lilywhite, Mrs. Wall, Myrtle, Prince of Wales, Zaidce, Golden King, The King, Evelyn Kirtland, Mary Fennell, Daisy Rand, Mrs. Frank Pendleton, etc., etc.*

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
PUBLISHED MONTHLY ON THE FIRST OF THE MONTH BY
MADISON COOPER, CALCIUM, N.Y.

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Special favors to none, and a square deal to all.

Canadian and Foreign
Subscription Price
\$1.00 per year

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No. 4

*Gla-di'-o-lus is the singular of Gla-di'-o-li.
Correctly pronounced with accent on the syllable "di."*

Gladiolus Corm Diseases.

This subject is brought to our attention by the receipt of a Cornell University Agricultural Experiment Station bulletin entitled "The Hard Rot Disease of Gladioli," by Prof. L. M. Massey. Prof. Massey has gone into this subject very thoroughly and the bulletin in question covers about 30 pages. We infer that a copy of this bulletin may be had on application to the above mentioned institution at Ithaca, N. Y. The bulletin speaks of the importance of the industry, the prevalence of the disease and gives the symptoms, life history, source of infection and experiments conducted to prevent or eliminate the disease. Among other suggestions are methods of treating soil and also treating corms to kill the germs of the disease. Considerable is said on the question of corm infection, longevity of the fungus causing the disease and the scientific side of the subject seems to be thoroughly covered. It is to be regretted that Prof. Massey did not summarize the results of his work to make the information quickly available to the non-scientific reader.

Without wishing to detract from the value of this bulletin to the Gladiolus in-

dustry, we would point out that Gladiolus growers should not become frightened if disease is present in their product, nor if it shows in stock purchased from other growers. The disease is not liable to spread; otherwise, there is no doubt but what the growing of Gladioli successfully would be a very serious problem. Prof. Massey states that the hard rot disease of the Gladiolus probably exists wherever this flower is grown.

As a matter of fact, the Gladiolus is of the easiest culture and even those who have had little experience and pay no attention to the scientific end of the work, have no serious difficulty in securing satisfactory results. Occasionally serious troubles are reported, but they are isolated cases and not generally prevalent. The hard rot disease nor any other disease which has come to our attention is especially dangerous if ordinary careful cultural conditions are used. About the most dangerous in any ordinary cultural conditions is the use of barnyard manure in large quantities and especially if freshly applied. The Gladiolus is quite sensitive to such conditions and various rots, scabs, etc., are the result.

From our own observations we are of the opinion that the so-called hard rot

is largely the result of harvesting corms which are immature, that is, not fully developed and filled out. Such corms when improperly cured and exposed to rather dry air of the storage room are more susceptible to hard rot than well developed corms. In fact, if corms are planted at the usual time and dug rather late, and well cured before storing, hard rot is practically unnoticed under our conditions. Prof. Massey has found that mature corms are not subject to the hard rot disease to any considerable extent but that it attacks small corms mostly.

The cause of disease in Gladioli is largely attributable to fungus or mold spores and this probably is the reason why manure freshly applied causes so much trouble. The editor's method of planting, which includes the opening of a broad trench six inches wide at least several days in advance of planting and preferably a week or two in advance of planting, allows the sunlight to purify the soil to a considerable extent, and we believe that this is one reason why our results have been superior. This plan is hardly practicable on a commercial scale, perhaps, but it certainly could be practiced by small growers.

Special attention should be given to the so called "curing" of corms at digging time. It is not only important that the corms be pretty well dried but exposure to direct sunlight is of great assistance in preventing and eliminating disease. From three to six days in the field and a daily turning to give even exposure is none too long.

We offer the above suggestions for the reason that those who read the scientific bulletins on Gladiolus disease are likely to infer that the Gladiolus is difficult of culture, whereas the reverse is the case.

MADISON COOPER.

We understand that Holland growers have arranged for the insuring of shipments of plants and bulbs to this country, and that this insurance covers not only war risk, but also damage or deterioration

to goods from whatever cause, and that the insurance covers until the goods arrive at their final destination. Doubtless the Dutch shippers have found the number of claims made on shipments to this country to be onerous, and this insurance has been undertaken as a matter of self-protection. Goods arriving in bad condition in this country should be promptly reported, as this will facilitate the process of adjusting claims.

We want to thank growers of Gladioli who publish catalogues, for the very cordial support and assistance which they are giving to THE MODERN GLADIOLUS GROWER. Practically without exception they have responded to our suggestion to mention THE MODERN GLADIOLUS GROWER in their catalogues, and it has been very helpful in securing subscriptions from the real Gladiolus enthusiasts, not only of the United States, but of the entire world. THE MODERN GLADIOLUS GROWER is without doubt the most important factor in the Gladiolus trade today, and it has done more during the three years of its existence to popularize the Gladiolus than any other influence. We do not think that anyone will deny us this statement. This is because the friends of the Gladiolus have helped and we do not take especial credit to ourselves for the work accomplished.

We recommend Gladiolus growers who are looking for some good new things in Gladioli, to go back over the last three or four months' issues of THE MODERN GLADIOLUS GROWER and take note of the special offers in our advertising pages. There are some of the very finest things offered and at reasonable prices. This month is no exception to the rule, but some of the things mentioned in past issues are not advertised this month.

Please remember that we can furnish a complete file of back issues of THE MODERN GLADIOLUS GROWER with indexes. Single issues at 7c. each. Complete years at the present subscription price.

WAYSIDE RAMBLINGS.

GROWING BULBLETS IN THE HOUSE DURING THE WINTER.

I do not mean to say that this method is practical, but am just giving a little experience that I accidentally discovered.

In potting up some Paper White Narcissi, Tulips, and Hyacinths for use in my home during the winter, in boxes and large size pots, I used the soil from my Gladiolus garden, put the boxes and pots in the cellar from last November until about Jan. 20th when I brought them to the light and warm room. I soon discovered that what looked at first to me like grass growing quite thickly among the bulbs, and which was allowed to remain, keeping the soil wet at all times, and the warmth from the rooms together with the fresh air which I at all times keep in the room where my flowering bulbs are kept, that the young growth was Gladioli. They are now at this time, Feb. 5th, four to five inches high and very healthy looking. I shall continue to keep them growing after the bulbs of Tulips, etc., have bloomed, and watch the results very carefully. I do not recall having read of any one making it a practice to start bulblets in this way, but if any readers of THE MODERN GLADIOLUS GROWER have had this experience I would be glad to know the result.

T. H. FULLER.

GLADIOLUS EUROPA.

There seems to be considerable difference of opinion or experience with regard to the vigor and productiveness of *Europa*. Last season was a very trying one here, owing to most intense heat and long continued drought. The latter condition was not uniform throughout the state but was much worse in spots. I planted bulbs in several patches on rented land, one lot being sandy and usually favorable but bad this season. Others, planted later, on good soil with clay subsoil had more moisture and got the later rains. On this land I planted *Europa* in different size bulbs and all did well and were free from disease. I have never been able to get any satisfaction from *Blanche* though it is fine when conditions are favorable. In my limited experience it is given to blight and does not increase well. On the whole I am decidedly in favor of *Europa*, as compared with any other pure white that I have tried.

GEO. S. WOODRUFF.

LIFE HISTORY OF A GLADIOLUS CORM.

Regarding the behavior of a Gladiolus bulb if planted year after year: Several years ago I found an almost black flower among seedlings raised by Mr. Norman Cole. For three successive years it blossomed, but with each year the new bulb grew smaller and finally, there was not strength enough in it to grow a new one, and I lost it. About the same time I got a very large flowered bulb in a mixed collection and, because of the peculiar colors of the flowers, I carefully observed it. For three years it grew and blossomed finely, but did not multiply nor produce bulblets. A year ago last September, when I dug it, the bulb measured 9½ inches in circumference, but there were no bulblets. Last September it had produced two bulbs each over 9 inches in circumference.

C. L. WILLIAMS.

TREATING BULBLETS BEFORE PLANTING.

In planting bulblets it will be found that almost every bulblet will grow if the tough outer coat is removed. Where the stock is precious and every bulblet has to count and you have a great many varieties and time has to be saved, just take a sharp pen knife and strip off a portion only of the outer skin not stopping to free the bulblet entirely. Generally speaking, it is only necessary to pierce the outer coating, the bulblet will do the rest. To remove all the outer coating takes two or three times as long sometimes.

In the farm seed catalogs I see they have a scarifying machine that pierces the outer coating of sweet clover seed as there is the same difficulty in germinating this clover seed on account of the tough outer coating as in germinating Gladiolus bulblets. Has any reader ever seen one of these clover seed scarifiers work, and if so, do they think it would be possible to scarify Gladiolus bulblets in the same manner with perhaps some adjusting of the machine for the different sizes of the bulblets? B. F. STALNAKER.

CORMELS TWO YEARS IN STORAGE.

Contrary to the teachings of some growers, I kept over 2½ bushels of *Mrs. Francis King* bulblets from 1914 and planted them in 1916, and never had bulblets germinate better or make a more healthy growth than these two year old bulblets. They were very dry and I kept them in crates about four inches deep in a very dry house cellar.

P. O. COBLENTZ.

The American Gladiolus Society.

Preliminary Schedule of the Eighth Annual Exhibition of The American Gladiolus Society to be Held Under the Auspices of the New York Botanical Society, The Horticultural Society of New York, and Florists' Club of New York, in the Museum Building, Botanical Gardens, Bronx Park, New York City, N. Y., August 23, 24, 25 and 26, 1917.

SCHEDULE OF PRIZES.

OPEN TO ALL.

Prizes offered by the New York Botanical Garden, The Horticultural Society of New York and The Florists' Club of New York.

	1st	2nd	
No. 1—	\$50	\$25	For the most artistic display covering not less than 250 sq. feet, any decorative material may be used.
No. 2—	40	20	Best and largest collection of named varieties, 6 spikes of each variety.
No. 3—	20	10	Fifteen Vases, 15 varieties, 12 spikes of each
No. 4—	20	10	Ten Vases, 10 varieties, <i>Primulinus Hybrids</i> , 12 spikes of each.
No. 5—	15	10	Twenty-five Vases, 25 varieties, 3 spikes of each.
No. 6—	10	5	Twenty-five spikes artistically arranged, receptacle to be furnished by the exhibitor.
No. 7—	10	5	Vase 25 spikes, White, one variety.
No. 8—	10	5	Vase 25 spikes, Red, one variety.
No. 9—	10	5	Vase 25 spikes, Crimson, one variety.
No. 10—	10	5	Vase 25 spikes, Pink, one variety.
No. 11—	10	5	Vase 25 spikes, Yellow, one variety.
No. 12—	10	5	Vase 25 spikes, Blue or Lavender, one variety.
No. 13—	10	5	Vase 25 spikes, Purple, one variety.
No. 14—	10	5	Vase 25 spikes, any other color, one variety.
No. 15—	10	5	Vase 25 spikes, Lemoinei Type, one variety.
No. 16—	10	5	Vase 25 spikes, <i>Primulinus Hybrids</i> , Yellow.
No. 17—	10	5	Vase 25 spikes, <i>Primulinus Hybrids</i> , Orange.
No. 18—	10	5	Vase 25 spikes, <i>Primulinus Hybrids</i> , any other color.
No. 19—	10	5	Vase 25 spikes, Ruffled, one variety.
No. 20—	10	5	Vase 25 spikes, any variety not in commerce previous to 1917.
No. 21—	10	5	Five vases, 5 varieties, 12 spikes of each.
No. 22—	10	5	Five vases, 5 varieties, 12 spikes of each predominating color of bloom White.
No. 23—	10	5	Five vases, 5 varieties, 12 spikes of each, predominating color of bloom Pink.

	1st	2nd	
No. 24—	10	5	Five vases, 5 varieties, 12 spikes of each, predominating color of bloom Red or Crimson.
No. 25—	10	5	Five vases, 5 varieties, 12 spikes of each, predominating color of bloom, Purple, Blue, Lavender or Mauve.

Prizes offered by Charles F. Fairbanks.

	1st	2nd	
No. 26—	\$10	\$5	Five vases, 5 varieties, 12 spikes of each, predominating color of bloom Yellow.
No. 27—	20	10	Best new seedling, one spike.
No. 28—	5	3	Vase 12 spikes, any one variety not in commerce.
No. 29—	3	2	Vase 6 spikes, any one variety not in commerce.

Prize offered by T. A. Havemeyer.

	1st	2nd	
No. 30—	\$10	\$5	Best collection of Montbretias.

H. E. Meader, Dover, N.H.

No. 31—Cut glass vase, value \$5, best new Yellow *Primulinus Hybrid* seedling, purity of color and size to count. Not less than 5 spikes.

W. E. Fryer, Mantorville, Minn.

No. 32—Twenty-five bulbs of *Mrs. H. E. Fryer* for best 12 spikes of that variety.

Hitchings & Co., Elizabeth, N. J.

No. 33—A silver cup, value \$10, for the most artistically arranged basket or hamper of blooms; not more than 25 spikes.

Austin-Coleman Co., Wayland, Ohio.

No. 34—Silver Cup—Best Yellow seedling, never before exhibited, one or more spikes.

Munsell & Harvey, Ashtabula, Ohio.

No. 35—First prize, 30 bulbs; second prize, 20 bulbs of *Hazel Harvey*, for best vase any Red variety not less than 10 spikes.

C. Betscher, Canal Dover, Ohio.

No. 36—First prize, \$5; second prize, \$3, for best 25 spikes *Primulinus Hybrids*, not less than 4 inch blossoms.

No. 37—First prize \$10; second prize, \$7.50, for best 25 spikes *Crimson Glow*.

No. 38—One New Peony, *E. B. Bronning*, value \$25, best vase 10 spikes *Crimson Glow*.

No. 39—One New Peony, *F. E. Willard*, value \$15, best vase 6 spikes *Crimson Glow*.

No. 40—One New Peony, *Chestine Gowdy*, value \$5, best vase 3 spikes *Crimson Glow*.

No. 41—One New Peony, *Chestine Gowdy*, value \$5, best 10 spikes *Europa*.

- No. 42—One New Peony, *M. M. Colusaac*, best 10 spikes *Magnificent*.
- G. D. Black, Albert Lea, Minn.
No. 43—First prize, 60 bulbs; second prize, 40 bulbs of *Golden King*, for best 12 spikes that variety.
- Clark W. Brown & Son, Ashland, Mass.
No. 44—First prize, \$3; second prize, \$2, best vase, Mauve, Lilac or Violet seedling, never before shown.
- W. Atlee Burpee & Co., Philadelphia, Pa.
No. 45 \$10—Best collection 10 varieties, 6 spikes each.
- A. E. Kunderd, Goshen, Ind.
No. 46—First, Gold Medal; 2nd, Silver Medal; 3rd, Bronze Medal. Best collection Kunderd's varieties; plain and ruffled.
- Earl Edgerton, Lansing, Mich.
No. 47—Bulbs to the value of \$5, winner's selection, for best vase 3 spikes *Lilywhite*.
- THE MODERN GLADIOLUS GROWER, Calcutia, N. Y.
No. 48—To every exhibitor in the Open Class, not already a subscriber, a one year subscription to THE MODERN GLADIOLUS GROWER.
- FOR NON-COMMERCIAL GROWERS.
- Prizes offered by the New York Botanical Garden, The Horticultural Society of New York and The Florists Club of New York.
No. 50—First, \$30; second, \$15—For the most artistic display covering not more than 150 sq. ft. any decorative material may be used.
No. 51—First, \$15; second, \$10—Best and largest display named varieties, 6 spikes of each.
No. 52—First, \$15; second, \$10—Best table decoration.
- Prizes offered by Charles F. Fairbanks.
No. 53—First, \$5; second, \$3—Vase 12 spikes, White, one variety.
No. 54—First, \$5; second, \$3—Vase 12 spikes, Pink, one variety.
No. 55—First, \$5; second, \$3—Vase 12 spikes, Red or Crimson, one variety.
No. 56—First, \$5; second, \$3—Vase 12 spikes, Yellow, one variety.
No. 57—First, \$5; second, \$3—Vase 12 spikes, Blue, Purple or Lavender, one variety.
- Prizes offered by T. A. Havemeyer.
No. 58—First, \$5; second, \$3—Vase 12 spikes, any other color, one variety.
No. 59—First, \$5; second, \$3—Vase 12 spikes, Lemoinei type, one variety.
No. 60—First, \$5; second, \$3—Vase 12 spikes, *Primulinus Hybrids*.
No. 61—First, \$5; second, \$3—Vase 12 spikes, Ruffled, one variety.
No. 62—First, \$3; second, \$2—Vase 6 spikes, White, one variety.
No. 63—First, \$3; second, \$2—Vase 6 spikes, Pink, one variety.
No. 64—First, \$3; second, \$2—Vase 6 spikes, Red or Crimson, one variety.
No. 65—First, \$3; second, \$2—Vase 6 spikes, Yellow, one variety.
No. 66—First, \$3; second, \$2—Vase 6 spikes, Blue, Purple or Lavender, one variety.
No. 67—First, \$3; second, \$2—Vase 6 spikes any other color, one variety.
No. 68—First, \$3; second, \$2—Vase 6 spikes, Lemoinei Type, one variety.
- No. 69—First, \$3; second, \$2—Vase 6 spikes, *Primulinus Hybrids*.
No. 70—First, \$3; second, \$2—Vase 6 spikes, Ruffled, one variety.
No. 71—First, \$5; second, \$3—Six vases, 6 varieties, 3 spikes of each.
No. 72—First, \$5; second, \$3—Best collection of Montbretias.
- K. Velthuys, Hillegom, Holland.
No. 73—Most artistically arranged group—quality of flowers to count more than numbers. First, \$12; second, \$8.
- L. Merton Gage, Natick, Mass. — Sunny-side Gladiolus Gardens.
No. 74—For best 6 spikes of *Mrs. Frank Fendleton*—First, 50 bulbs of same variety; second, 30 bulbs; third, 20 bulbs.
- Carter's Tested Seeds, 102 Chamber of Commerce Bldg., Boston, Mass.
No. 75—First, \$8; second, \$3—Best 10 named varieties, 1 spike each.
- H. E. Meader, Dover, N. H.
No. 76—12 bulbs *Gladiolus Myrtle*, for best vase 5 spikes *America*.
- Raymond W. Swett, Saxonville, Mass.
No. 77—First, Bulbs to the value of \$5; second, Bulbs to the value of \$3; third, Bulbs to the value of \$2—For best 3 spikes named varieties in one vase.
- Willis E. Fryer, Mantorville, Minn.
No. 78—Twenty-five bulbs of *Mrs. W. E. Fryer*, for 12 best spikes of that variety.
- Michells Seedhouse, 518 Market Street, Philadelphia, Pa.
No. 79—First, Silver Medal; second, Bronze Medal, for best seedling never before exhibited, not less than 3 spikes.
- Herman H. Baer, New Hyde Park, L. I., N. Y.
No. 80—\$5 in gold for best 12 spikes *Crystal White*.
- Homer F. Chase, Wilton, N. H.
No. 81—\$5 for best 3 spikes *Mrs. Watt*.
- Arthur Cowee, Berlin, N. Y.
No. 82—\$5 cash for best vase 25 spikes *Peace*.
No. 83—\$5 cash for best vase 6 spikes *Peachblow*.
No. 84—\$5 cash for best vase 6 spikes *Papilco Rose*.
No. 85—\$5 cash for best vase 6 spikes *Dawn*. (Gross).
No. 86—\$10 cash for best vase 6 spikes *Afterglow*.
No. 87—\$10 cash for best vase 6 spikes *La Luna*.
No. 88—\$10 cash for best vase 1 spike each of the varieties *War, Peace and Prosperity*.
- John Lewis Childs, Flowerfield, L. I., N. Y.
No. 89—First, \$10; second, \$5—Best and largest collection Childs' type, named.
- B. Hammond Tracy, Cedar Acres, Wenham, Mass.
No. 90—\$5 in gold for best Pink Gladioli in the show.
- American Gladiolus Society.
No. 91—First, Silver Medal; second, Bronze Medal—Best exhibit of at least 15 varieties, 3 spikes each, correctly named.

A. E. Kunderd, Goshen, Ind.

No. 92—First, Gold Medal; 2nd, Silver Medal; 3rd, Bronze Medal—For best exhibit Kunderd's *Primulinus Hybrids*, open to those who have never exhibited before the A. G. S.

THE MODERN GLADIOLUS GROWER, Calcium, N. Y.

No. 93—For the best display of Gladioli consisting of not less than ten spikes nor more than twenty spikes. Not more than three spikes of any one variety. No preference to be given to named varieties. First prize, A Life Subscription to THE MODERN GLADIOLUS GROWER; second prize, a five year subscription to THE MODERN GLADIOLUS GROWER; third prize, a two year subscription to THE MODERN GLADIOLUS GROWER.

The Garden Magazine, Garden City, N. Y.

No. 94—The Garden Magazine Achievement Medal to the winner of the most first prizes in non-Professional Class, 3 or more competitors.

Gladioli Improves Post Office Grounds.

Postmaster Cook of Austin, Minn., is to be congratulated on what he has done with the public grounds under his charge. He secured an order for the landscaping of the Austin post office grounds, and Miss Grace Kimball of Waltham, Minn., was the winner of the competition for the work. In addition to hardy trees and shrubs, etc., Gladioli will be used as a part of the design. Here is a suggestion which other postmasters may work on to advantage. If they cannot get an official order for the work they may be able to do something on their own account.

A typographical error crept into the article by Geo. S. Woodruff in the February issue describing crates for storing Gladiolus corms. Where it reads "four inches wide on one side and two on the other," it should read feet instead of inches. It is hardly probable that a careful reader would have misunderstood the meaning, but we make the correction in the interest of accuracy.

Advertisers Note This.

It is a fact that I find the advertisements in THE MODERN GLADIOLUS GROWER, quite as interesting as the reading matter. Besides enabling one frequently to pick up bargains, these advertisements are a Gladiolus history, and enable one to be *au courant* with the many new varieties being introduced.

T. DABNEY MARSHALL.

We beg to repeat that growers of Gladioli, amateur or professional should have on file copies of all Gladiolus catalogues issued this year. They are a wonderful production of the printer's art for one thing and contain descriptions of the best varieties in commerce.



Gladiolus—*Europa*.

Our readers are already familiar with the variety, *Europa*, and we have had some complimentary remarks to make regarding it and the illustration we are using this month gives some idea of what may be expected of *Europa* under intensive culture. This photograph was sent us some months ago from Lompoc, Calif., by the late Edwin Lonsdale.

Europa has proved to be weak and subject to disease with many growers and few indeed are able to grow it to perfection and without undue losses. The above photograph will perhaps show the reason why the editor has suggested that if he were obliged to plant one hundred corms of *Europa* to obtain a single, first class flower spike, yet he would be willing to stand the cost. *Europa* is certainly a grand variety when properly grown and there are few white varieties that can compete with it on the exhibition bench.

The Gladiolus. ❄

WHEN our secretary requested me to write a paper for this meeting on the Gladiolus, it was somewhat reluctantly that I consented to do so, knowing as I did that there are several members of this Society who, for many years have been growing this flower in a commercial way, either for the bulb trade or the cut flower market and have had more experience than I. I am not presuming to teach these professional growers with much experience, anything new about the Gladiolus; but if I may help those who have had a very limited experience in growing this flower, or those who have not been living up to their opportunities, and have missed a great deal of pleasure by not growing it at all, then this paper shall not have been written in vain.

Nearly forty years on the old home farm in Wisconsin, in one of the long flower beds on either side of the path, extending from the house to the front gate, there grew a clump of Gladioli of perhaps a dozen spikes. They were not such as our *America*, *Niagara* or *Mrs. Frank Puddleton* of to-day; but the small old fashioned red ones such as our grandmothers grew. Though only a small lad I was very fond of flowers. I knew the names of all the cultivated flowers on the place, and there were many. I knew where all the different kinds of wild flowers that grew in our community were to be found in greatest abundance; but somehow those Gladioli did not appeal to me as being very beautiful. For twenty-five or thirty years afterward, whenever I saw or heard the word Gladiolus I always associated that name with the old fashioned flowers of my boyhood home. I suspect that there are many who are still thinking of these flowers in very much the same way as I did.

When showing our Gladioli at the fairs the past summer, the remarks that I heard from those who were looking at our exhibit convinced me that comparatively few were acquainted with the Gladiolus in its modern state of development. We found but few who had grown any but the most common red ones. Many expressed surprise when they saw the white, yellow and blue ones. While others didn't know they were grown so large. Some took it for granted that

such flowers as those must have been grown in a greenhouse by an expert florist, and seemed hardly able to believe me when I told them that they were grown in a field, cultivated with a horse and were as easily grown as potatoes.

In fact the Gladiolus requires much the same conditions that are necessary for growing a good crop of potatoes. They will grow and do well in most any soil, but are at their best in rather light, rich, mellow soil that is well supplied with humus. Well rotted stable manure makes a good fertilizer. If fresh manure is used it should be applied in the Fall and ploughed under. The ground should be ploughed or spaded to a good depth so that the bulbs may be planted deeply, and have two or three inches of loosened soil in which the roots can grow. As for location, they are sun loving plants and should not be planted in the shade. Neither should they be planted near large trees where the roots of the trees will rob the soil of plant food and moisture. They need a good supply of moisture, especially at the time the buds are beginning to open, still they should never be planted in low wetland as the bulbs are liable to rot in such a location. When they are planted for garden decoration they may be planted in the border, between the low growing shrubs or other plants. Some like them massed in beds by themselves, planting them six or eight inches apart. When planted in this way, the varieties that are not too tall and have strong stiff spikes should be selected, as they will stand up better. If grown for cutting they would better be planted in rows so they can be cultivated with a wheel hoe and be given good care with a small amount of labor. The large bulbs should be planted five or six inches deep, and two to four inches apart in the row. The rows may be spaced to suit your convenience in cultivating. In growing large quantities, we plant the rows 30 to 36 inches apart so a horse may be used in cultivating. The depth to plant depends on the size of bulb, three inches being deep enough for very small bulbs and bulblets. The bulblets are sown quite thickly, in drills much the same as peas. In covering, we ridge the rows and when the weeds start, and after each rain, we rake the ridges lengthwise with a garden rake to keep the weeds killed, to conserve the moisture in the soil, and to keep a crust from forming which would

*This paper was read before the Northeastern Iowa Horticultural Society, at Decorah, Iowa, Nov. 18, 1915, by L. R. Dockerty, of Mitchell, Ia.

make it difficult for the tiny plants to come up. We have the ridges raked down level by the time the plants get up even with the top of the ground. We continue to use the rake until the plants are high enough so the wheel hoe can be used. The bulblets of many varieties germinate slowly and the bulblets of all varieties will come up better and quicker if they are soaked a day or two before planting. The flowering bulbs may be planted as early as the ground is in good condition to be worked or any time thereafter until the last of June. A succession of bloom may be secured by planting early, medium and late varieties, or by planting at intervals of about two weeks. The length of time required for blooming varies with different varieties, from about 75 to 100 days. As for colors almost any color or shade can be found in this flower; but most varieties consist of a combination of colors. Flowers having but one color and one shade of that color are very rare. This is especially true of whites, yellows and blues. In these colors there seems to be plenty of room for ambitious breeders of these flowers. Which varieties are the best? We are not attempting to name the best ten for fear of starting an argument. We will be content to name a few that we consider good; and invite others to add to this list when we have finished. As a general statement we believe those varieties are best that have a strong constitution and the ability to produce good blooms under average conditions, or even under adverse conditions if necessary. In pure white *Europa* seems to be in the lead, but is rather weak in constitution. Among the near whites *Lily Lehmann*, *Peacc*, *Alice Carey*, *Meadowdale* and *Chicago White* are all good. In pinks we like *Mrs. Frank Pendleton*, *Tacotic* and *Tracey's Dawn*. In yellow shades we would name *Niagara*, *Golden King*, *Schwaben* and *Victory*. In reds *Mrs. Francis King*, *War*, *Ida Van*, *Lübesfeuer* and *Burrell*. In blues, *Groff's Blue Jay*, *Baron Hulot* and *Senator Volland* are the best that we have tested.

The Gladiolus is propagated in three ways. By division—that is by one bulb throwing up two or more tops and a new bulb forming at the base of each. By bulblets or cormels which grow in clusters around the base of the large bulb or corm, and by seeds. The first two ways will produce blooms like the parent; but from the seed it is very unlikely that any two will be alike. It is by the last method that new varieties are originated. Many growers are growing seedlings from their choicest sorts and many new varieties are

being introduced each year. We predict that in ten years' time most of the standard sorts of today will be placed on the discarded list, and their places filled by newer and better varieties. The popularity of this flower is increasing rapidly and is world wide in its extent. Nearly every one who grows it becomes an enthusiast. It can be grown by any one on almost any soil. The bulbs are inexpensive and you have them left with their increase for the next year's planting. In coloring they are superb and are often called the poor man's orchids. As a cut flower we know of nothing that equals them. If they are cut when the first blossom opens and placed in water they will continue to bloom until the last bud has opened. When the water is changed, the withered blossoms should be removed and a little cut off of the lower end of the spikes. They may be sent a long distance by express or mail and reach their destination in good condition, and bloom out nicely when placed in water. For shipping they should be cut just before the first buds begin to open. The bulb will not be injured by removing the flowers if most of the foliage is left. Seed should not be allowed to ripen unless it is wanted for planting.

We trust you will forgive us if we overstep the bounds of our subject a little in pleading for a more liberal planting of flowers. Of course we want you to plant some Gladioli, but for goodness sake do not stop there. There are the Dahlias, the Cannas, the Peonies, the German and Japanese Iris, Tulips, Hardy Phlox, Hollyhock, Delphiniums, Oriental Poppies, Hardy Lilies, Roses and the various flowering shrubs, all easily grown. Then there are a lot of annuals, grown from seed, that are very satisfactory and not difficult to grow. Raise flowers. They exert a refining influence and yourself and family will be the happier and better for having grown them. Beautify your grounds and you will soon find you have started something that is contagious. Others will follow your example. An old German gentleman who bought a place and moved into our town last Spring was looking over a neighbor's flower garden and became very much interested. Before he went home he said, "You schust wait. I show you next year," and he will. Another beauty spot will be added to the community where weeds have grown before. "We pass this way but once. Let us beautify the pathway as we go so the world can see which way we went." When we have finished our labors here we will pass on to our reward, feeling that we

have helped to make this old world a brighter, happier, and better place in which to live.

Wild Cucumber Vine.

The wild cucumber vine—*Echinocystis lobata*—is one of the quickest growing annual climbing plants we have. It is useful for covering unsightly outhouses, high fences and arbors. It is very showy when in full bloom, the creamy-white flowers being borne in long racemes. The blossoms are followed by bladder-like fruits two inches long, which are covered with soft prickly spines. The fruit or seed pods are a never-failing source of interest to the children, who delight in making them burst.

On account of the thick leathery coat, the seed is very slow in germinating—in fact, I have known sowings to remain dormant in the soil from spring until the following spring, ere sprouting, writes George W. Kerr in *Country Gentleman*. Therefore, the only sure way to have a perfect stand of plants is to sow the seed in the Fall or early Winter, thus subjecting them to the influences of the snows and rains; then they will quickly germinate in early Spring.

In sowing, cover the seed with not more than one inch of soil, and place them six inches apart. This will be ample to give you a solid mass of luxuriant growth. The only drawback to this useful vine is that should the soil ever become dry the leaves quickly become yellow at the bottom. To guard against this, give regular and copious supplies of water during periods of drought.

There is never any necessity of sowing seed the second year, as self-sown seedlings will appear in abundance. In spite of its precocious habit of self-sowing, there is no danger of its ever becoming a noxious weed as the seedlings not required are readily destroyed.

Improving the Canna.

From a late number of the *Philadelphia North American* we learn that for twenty-one years a Chester county (Pa.) man, Antoine Wintzer, has been toiling day in and day out to get what florists consider an acme of their art, a white canna. In these twenty-one years he has produced more than 60,000 varieties of cannas * * * And out of these only 5,000 have been considered distinctive. * * *

A majority of the improved American cannas in the last twenty years have originated with Mr. Wintzer. His is the

Mrs. Alfred F. Conard, the brilliant salmon-pink canna; Wintzer's *Meteor* has won many commendations; another pink is *Mrs. Woodrow Wilson*; in fact, Mr. Wintzer has originated more pink cannas than all the other American growers put together. He has waved his hand over a mass of pink, and transformed it into a field of red. He has touched a leaf of deep green and it has turned bronze. He has passed a magic wand over a field of insignificant blossoms and trebled their size. Yet he says he is no wizard.

Selling Our Flowers.

In February we moved to a small truck farm in the suburbs. When the flowers began to appear we discovered a bed of beautiful dark red tulips with extra long stems. At the same time our lilacs bloomed. I filled two large baskets with blossoms and took them to the leading retail florists in town. They sold at once. Lilies of the valley, blue flags and peonies were sold to the same stores. By that time the farmers were overstocking the market with flowers, and the florists no longer had sale for garden flowers.

Then I discovered that jewelry stores and custom tailor shops were having our kind of flowers in their windows. I filled a basket with bouquets and visited them and sold my flowers at once. I found that they preferred to buy from me rather than to spend the time to go to market. I now have a list of stores that I visit twice weekly. I sell all the flowers we have and my customers are so well pleased they have asked me for cultivated flowers.

Our buttermilk I sell to a large drug store which retails it at the soda fountain.
—CLARA SASSAMAN in *Country Gentleman*.

Gladiolus Corm Grader.

Raymond W. Swett writes that the Dutch sieves made of pig-skin with round holes stamped out are much quicker and more accurate for the grading of Gladiolus corms than the wire screens which are employed in this country. The wire screens measure more across diagonally than across the square of the mesh, and, therefore, cannot possibly be accurate for grading for size. We have never seen these pig-skin sieves but can readily understand how they would be much better than the wire screens with square mesh. We would suggest that a sieve could be made of galvanized iron with round holes punched, but the pig-skin sieve is the best because much less likely to bruise the corms.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Vitality of Cormels—Increasing Valuable Varieties, Etc.

TO THE EDITOR:—

When planting my cormels in the spring I follow the usual directions as to soaking and sowing thickly, but in the fall I find many yet in the dormant state; alive but not sprouted. If these were taken up, kept over another winter and sown the following spring, would they be apt to grow?

Suppose one had a bulb or two of a choice variety, and wished to get as much increase as possible; how would it do to dig the bulbs carefully, allowing the cormels to remain attached to the mother bulbs, and plant the mother bulbs with the cormels attached in the spring, the theory being that the cormels would draw nourishment from the mother bulbs and germinate more surely? Would this procedure injure the mother bulbs?

Where time is limited, what effect would it have to leave the old dead corm attached when planting in the spring?
H. M. G.

Answer:—It nearly always occurs that when digging cormel grown stock that cormels which have failed to germinate are found, and commonly these are simply allowed to remain among the cormels growing from the new corms, and there is no doubt but what many of the ungerminated cormels will grow when planted the following spring. Indeed, several correspondents have suggested that cormels will grow better if held over one year and planted the second year, but we do not advise this as a matter of practice.

There would be no gain in leaving cormels attached to the parent corm if the idea was to increase stock as rapidly as possible. There is nothing in the idea that cormels will draw nourishment from the parent corm if attached to it by the old connection. The branches which attach the cormels to the parent corm die when dried and when planted again would have no life to supply nourishment to the cormels. The best way for rapid increase is to separate the cormels from the corms promptly at digging time. Cormels should be stored in moist sand and the corms cured and stored in a reasonably dry atmosphere. Cormels stored in moist sand will not dry out and acquire a hard shell, which shell is the main reason why they do not germinate more readily.

It would be bad practice to leave the old corm attached to the new corm when planting. Any tendency to disease in the old corm would be quickly transmitted to the new one and the inconvenience of handling the old corms with the attached roots would be a serious objection to a proper setting of the new corms. Planting sizes, however, which are not set singly, but drilled, are sometimes planted with old corms and roots attached.

Grading Gladiolus Corms for Size.

TO THE EDITOR:—

Under separate cover I am sending you four Gladiolus corms. The two larger ones can be passed through a $1\frac{1}{2}$ inch mesh sieve and the two small ones through a $1\frac{1}{4}$ inch, yet these are as large as corms that I buy for first and second size. I have been selling these for second and third size, but it has occurred to me that I might be mistaken. Will you please advise with reference to this matter of grading?
C. C.

Answer:—Gladiolus growers generally grade as first size any corm measuring $1\frac{1}{2}$ " or larger in its greatest diameter. The corms you send, all of them, would grade as first size, the three largest ones very easily and the smaller one of the four barely, as it measures exactly $1\frac{1}{2}$ ". Some growers, in fact, are not at all particular in grading and use a sieve for this purpose, and as a result many corms smaller than $1\frac{1}{2}$ " get into the first size on account of irregularities of the corms or projecting stems or roots. Second size corms should range in size from $1\frac{1}{4}$ " to $1\frac{1}{2}$ " and third size corms from 1" to $1\frac{1}{4}$ ". Fourth size corms from $\frac{3}{4}$ " to 1". Fifth size corms from $\frac{1}{2}$ " to $\frac{3}{4}$ "; and sixth size $\frac{1}{2}$ " and less. Some growers sell the small planting sizes up to $\frac{3}{4}$ " in a mixture of sizes and do not attempt to grade from fourth size down. The large wholesale growers grade almost exclusively by means of wire mesh screens and necessarily the grading is somewhat imperfect. It is generally the case, however, that there are enough that run over size to make good for those that run under size.

Catalogues and Price Lists.

H. E. Meader, Dover, N. H. -24 page retail catalogue well illustrated with the variety *Empress of India* in colors on the cover. The color descriptions are extra good.

Geo. S. Woodruff, Independence, Iowa. Retail catalogue of some of the best standard varieties in commerce and also many of the new introductions and novelties of merit. Varieties alphabetically arranged and careful color descriptions.

Thomas M. Proctor, Wrentham, Mass. Retail catalogue of Dahlias and Gladioli, eight pages and cover. The list of Dahlias is especially complete and Gladioli include the best standard sorts with some of the novelties.

Wayside Gardens, Mentor, Ohio. Retail price list of Gladioli and Dahlias.

The Decorah Gladiolus Gardens, Decorah, Ia. Retail price list of Gladioli featuring the Dr. Hoeg specialties.

Central Gladiolus Gardens, Milton, Mass. Retail price list of Gladioli with some interesting illustrations. Colored cover of especial merit.

Wayside Gardens, Mentor, Ohio. Retail price list of hardy plants.

T. H. Fuller, Battle Creek, Mich. Catalogue and price list of Gladioli.

Austin-Coleman Co., Wayland, Ohio. Catalogue of Gladioli, Chrysanthemums, Dahlias, etc. The Austin originations are especially well described.

Meehan's Mallow Marvels, which were advertised in the March issue of THE MODERN GLADIOLUS GROWER, have been growing in the editor's garden for several years and we can recommend this flower to those who are interested in a showy novelty. It is certainly striking.

Some quite wonderful bargains are offered in our advertising pages this month in the way of collections and second size corms. For the grower who is able to pick out the most meritorious varieties the bargains are pronounced.

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Gladiolus---Crystal White

The best white seedling to date for florists' use. A variety which everybody can grow. Good, healthy, vigorous and prolific.

Price for 1st size bulbs 25c. each, \$2.50 per dozen and \$15 per hundred.

Give it a trial.

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New Hyde Park, L. I., - - N.Y.

P. Hopman & Sons

Gladiolus Specialists

Hillegom, Holland

GLADIOLI--Named Sorts

	Per doz.	Per 100		Per doz.	Per 100
	post paid f.o.b. here			post paid f.o.b. here	
America, soft pink	\$.50	\$1.50	Loveliness, cream apricot	\$1.00	\$5.00
Augusta, white sh'd heliotrope .....	.50	1.50	Mrs. F. Pendleton, Jr.	1.50	7.00
Baron Hulot, dark violet .....	.50	1.50	Panama, deep pink .....	.75	5.00
Brenchleyensis, verm'l scarlet .....	.50	1.50	Peace, white, red blotch	1.00	5.00
Chicago, white early .....	.60	2.00	Pink Perfection, fine pink	1.00	6.00
Empress of India, dark maroon .....	.75	2.50	Rochester White, pure white	1.00	6.00
Europa, snow white	1.00	5.00	Schwaben, pale yellow	1.00	6.00
Glory of Holland, white .....	.75	5.00	Brunswick Mixture .....	.40	1.00
Halley, large salmon .....	.50	1.50	Groffs Hybrid Mixture .....	.50	1.50
Lily Lehman, white rosy tinge .....	.75	5.00			

At Dozen price, POST PAID. At Hundred price, F. O. B. HERE. Twenty-five (25) Bulbs of a kind at the hundred rate where not less than 100 bulbs are ordered. 6 Bulbs at dozen rate.

SPECIAL OFFER—To introduce my Gladioli I will send one each of the 17 named varieties as above and 3 Groffs Hybrids, 20 bulbs in all, blooming size, the lot for only \$1.00, post paid.

SWEET PEA SEED—Very Choice mixtures

Winter Orchid, mixed per oz.	35c.	All Kinds Fine, Mixed per oz.	15c.
Early Winter, Mixed per oz.	15c.	Zvolanek's Gold Medal, Mixed per pkt.	25c.
Spencer Extra Choice Mixed per oz.	25c.	The Five (5) Papers for \$1 post paid.	

AMARYLLIS (Hippeastrum)—The most beautiful and gorgeous of all the bulbous plants. With their brilliant colors, gigantic size, there is no other flower that will make a grander show than the Amaryllis. With their three to five large six to nine inch flowers on each scape. My stock has been crossed until it is now beyond doubt as fine as can be produced. Bulbs 50c. each, \$5.00 per dozen; for Mixed Unbloomed Seedlings. Bloomed and Selected Fancy Stock \$1.00 each, \$10.00 per dozen.

PANSY PLANTS—Large flowering. None better. 12 for 40c; 36 for 50c; 100 for \$2.00; 300 for \$5.00, postpaid. One ounce of choice Sweet Pea seed free with each dollar's worth.

— I HAVE NO CATALOG —

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This is what one of our friends thinks of them:

Maine Bulb & Flower Growers:

At the right time please send me \$— selection of Gladiolus bulbs—same as I had last year. They were beautiful and varied in color beyond description.

Yours truly, William E. Eaton,
15 Summit Ave. Wakefield, Mass.

Special Offer:

1 dozen AMERICA; 1 dozen MRS. F. KING; 3 MRS. F. PENDLETON; 3 NIAGARA.

All for \$1.00 postpaid.

Try the H. & N. mixture, containing many named varieties and Groff's Hybrids. 60c. per doz.

Maine Bulb and Flower Growers
Lewiston, Me.

Special Offer--

Mrs. L. Merton Gage

Glistening white, with an occasional suffusion of delicate pink; lower petals bear a dainty striping of rose pink. Anthers purplish blue. Flowers of good size and graceful form. Spike straight and strong; blooms early. One of the best of the whites. Awarded a First Class Certificate of Merit by the Worcester Co. Horticultural Society, Worcester, Mass., Aug. 12, 1915.

25c. each, \$2.50 per dozen.

Although "Mrs. L. Merton Gage" is not a solid white gladiolus, I believe it to be the best white gladiolus that is offered to date, and wishing to give every reader of this advertisement an opportunity to try this beautiful variety in comparison with other white sorts, I will make you the following offer for the next 30 days—

Six *full-size* bulbs of above variety for \$1.00 post-paid.

Sunnyside Gladiolus Gardens

L. Merton Gage, Prop'r.

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Brilliant Wine—One Color

(See February and March issues *The Modern Gladiolus Grower* for full description.)

Strong Blooming Bulbs, - - \$1.00 per Dozen, Postpaid

"Mrs. Watt" has been admired in my gardens above other varieties; it being exclusive in color. "Mrs. Watt" has proved to be most valuable to both florist and landscape gardeners, for floral work and decorative effect, where combined refinement and display are desired.

One-half dozen bulbs each of the following Gladioli for \$3.00, postpaid—value, \$3.75:

MRS. WATT, NORMA DEE CHILDS, DAWN, PROPHETESSE, PANAMA,
SCHWABEN, PEACE, GLORY, PRINCEPINE.

I ISSUE NO RETAIL CATALOGUE.

Prices Planting Stock "Mrs. Watt" to growers on application.

Homer F. Chase

Grower of Gladioli

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Myrtle The Perfect Pink Gladiolus Blossoms in the lovely tints of the trailing arbutus. Rare and beautiful as a pink pearl. See January number for full description.

Strong Bulbs 20c. each, \$2.00 per dozen.

Lily White Snow White and Lily Pure A white of delightful vigor and spotless purity. Will succeed anywhere. See February number for full description.

Strong Bulbs 50c. each, \$5.00 per dozen.

Is Pink your favorite color ? A garden of beautiful pink Gladioli from palest pink to deep rose, lovely and tasteful. 3 each of choicest eight varieties: America, palest pink; Taconic, silvery pink; Mrs. Pendleton, blush pink; Pink Perfection, apple blossom; Pink Beauty, peach pink; Panama, rose pink; Independence, coral pink; Halley, salmon pink. **All for \$1.00.**

You surely must try these. They are exquisitely dainty.

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H. E. MEADER, Gladiolus Specialist.

Dover - - - - New Hampshire

Let Us Send You

Mrs. Francis King

1st size bulbs at \$1.50 per 100

America

1st size bulbs at \$1.50 per 100

Independence

1st size bulbs at \$1.50 per 100

The bulbs are strictly first class in every respect.

If you are interested in ornamental shrubbery, trees or fruits, write us for catalog and prices.

We wish to thank the trade for the business given us this season, and to announce that our surplus stock of Gladiolus Bulbs of all sizes is now exhausted.

The Grinnell Nursery

Grinnell - - - - Iowa

E. E. STEWART

**Wholesale Grower of
GLADIOLI**

List of 85 varieties.

Brooklyn - - Mich.

DOLLAR SPECIALS

A wealth of bloom for a song.



EVELYN KIRTLAND

Strong substance, beautiful shade of rosy pink, darker at the edges, fading to shell pink; brilliant scarlet blotches on lower petals. Entire flower showing glistening, sparkling luster. Note Illustration measuring length of spike with yardstick.

50c. each; \$5.00 per dozen

50 Choice Gladiolus Bulbs
in at least six varieties named and properly labeled

\$1. Postpaid

10 Fine Dahlias
representing all the forms: 2 each. Peony, Cactus, Decorative, Col-larette, Show

\$1. Postpaid

10 Lovely Hardy 'Mums
in five colors, 2 each Pink, White, Red, Yellow, Bronze. These are new creations enjoying wide pop-ularity at the present time. Don't fail to try them.

\$1. Postpaid

10 Beautiful Iris
"The Orchid of the Garden." This is an extra quality selection and will more than please.

\$1. Postpaid

10 Sweet Everblooming Roses. All colors.

\$1. Postpaid

All Five Collections including **ONE BULB EVELYN KIRTLAND, \$5. Prepaid.**

If you would have beautiful flowers the three seasons, Spring, Summer and Fall, order the above Collections.

"The Home of Elm Hill Gladioli"

desires you to have a copy of their booklet; it is full of information. A postal will bring a copy.

Austin-Coleman Co.

Originators Giant and Distinct Forms Gladioli

Wayland - - - - Ohio

The Wilmore Floral Co.

(Successors to W. W. Wilmore, Jr.)

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Gladiolus Specialists

Growers of Bulbs and Plants

Gladioli, Dahlias, Phloxes, Irises, Etc.

Awarded Gold Medal at Panama-Pacific International Exposition for the best display of seedling Dahlias, and Bronze Medal on display of Gladioli.

OUR NEW CATALOGUE NOW READY. SEND FOR IT.

Specials!

Strong blooming
bulbs

	PER DOZ.
ATTRACTION	\$1.00
ELECTRA	.75
GLORY	.50
HYDE PARK (new)	1.00
LIEBESFEUER	2.00
LILY LEHMANN	.35
MARY FENNELL	2.00
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PEACE	.75
PRIMULINUS HYBRIDS	.50
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Margaret

Beautiful Carmine with white throat.

Per doz., \$1.30; per 100, \$9.

Prim. "Sunbeam"

The best and most distinct of all the Primulinus Type.

Per doz., \$2; per 100 \$15.

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The best early white.

Per doz., 35c; per 100, \$2.25

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**Vaughan's
Seed Store**

CHICAGO, 31-33W. Randolph St.
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Meehan's Mallow Marvels

These absolutely hardy perennials, originated by us, are of such surpassing beauty that they are considered the sensation of the plant world today.

From mid-summer until frost, when the sturdy 5-foot bushes are covered with the big gorgeous blossoms, the effect is really dazzling.

Even a single specimen, while in bloom, is the most conspicuously beautiful feature of the lawn or yard, and, used in masses, they dominate the entire grounds. No flower lover can afford to be without them. Order NOW.

Strong 2-year roots, Pink or White, 50c. each; 5 for \$2. Red, 75c.; 5 for \$3. Mixed colors, 35c.; 5 for \$1.50.

Write for our 1917 Hand Book TODAY.

It describes in detail hundreds of specially choice, well grown trees, shrubs, and hardy flowering plants, and tells how to grow them. Mailed FREE.

Thomas Meehan & Sons

6728 Chew St., Germantown,

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METZNER'S Grand Prize Strain Gladioli

Our Prize Winners at the Panama-Pacific International Exposition,
San Francisco, Cal., 1915

"Capt. Asher Carter Baker" (Silver Medal)

Flowers 4½ in. diam. Spikes 4 ft. tall.
Bright Scarlet. Strong bulbs. \$1.00 each.

"Dr. Frederick J. V. Skiff" (Gold Medal)

Flowers 5½ in. diam. Spikes 5 to 6 ft. tall.
Delicate Rose Pink. Strong bulbs \$1.50 ea.

"Polar Star" (Gold Medal)

Flowers 5 in. diam. Spikes 5 to 6 ft. tall.
Milk White. Strong bulbs \$2.00 each.

WE PREPAY CHARGES IN U. S.

Write for our 1917 Catalogue.

Metzner Floral Co.
Mountain View - California

YOUPELL'S Ne Plus Ultra Mixture

is made up from named varieties of various colors (except blue) and is recommended with the greatest confidence. It will especially appeal to those who want a variety of the choice flowers without the trouble of making a selection.

**Price, per doz., postpaid, 60c
per hundred, by express
collect, \$4.00**

Mixture of all blue shades, same as above.

A short and interesting history of the Gladiolus, with full cultural directions, will accompany each order.

H. Youell

538 Cedar St., Syracuse, N. Y.

Special Offer--

2nd Size Bulbs 1" to 1½"
50c. per doz., prepaid—

Niagara	Grace Henry
Klondyke	Prophetesse
Panama	Alice Carey
Minnesota	George Paul
Halley	Rouge Torch
Grenadier	Lily Lehman
Beecher	Baron Hulot
Scarsdale	Velvet King
Ida Van	Crackerjack
Baltimore	Pink Beauty
Jessie	Meadowvale
America	Independence
Columbia	Chicago White
Jean Dieulafoy	

Hazel Harvey, \$1 per doz.

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Growers of Gladioli

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Ideal Bulb Planter & Transplanting Tool

(Patent applied for.)

Capacity about 2000
bulbs per day.

(Length of tool, 3 feet.)

Works equally well in solid
turf, rocky soil, or clear gar-
den soil.

A GREAT LABOR
SAVER.

Price \$2.00 each.

By parcel post 25 cents extra.

Ideal Bulb Planter Co.

P. O. Box 373 Portland, Maine

Write for Particulars.



You want something NEW and FINE ?

—ask then quotations for our
new (special blue)

GLADIOLI

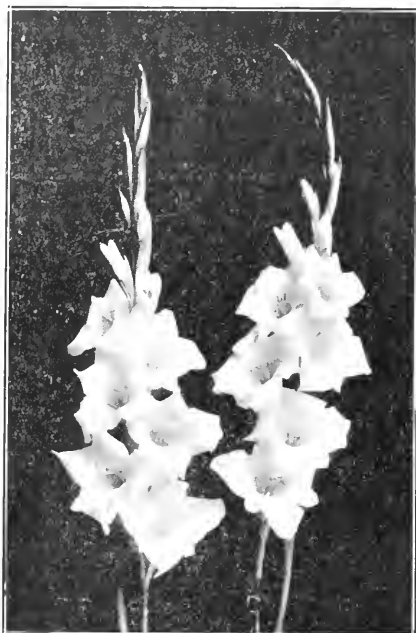
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c/o R. F. Lang, 8/10 Bridge Street
NEW YORK

K. VELTHUYS,

Hillegom - - - Holland



LILYWHITE

To Our Friends and Patrons:

WE ARE again well along towards "sold out" on Gladiolus bulbs, on some sorts already over-sold. After April 20 we do not expect to be able to fill any more orders for this season. If you contemplate sending us an order, please do so as soon as possible. Last year we returned all or part of the money on 216 orders.

Remember our 40 page catalog is free for 'a postal card request. It teaches you

"How to Grow Giant Gladioli"

and contains much other useful information. You ought to have a copy if at all interested in growing Gladiolus. You are perfectly welcome to a copy regardless of whether you send us an order or not.

Address

The Originator of the Ruffled Gladiolus

A. E. KUNDERD

Goshen, - - Ind, U. S. A.

Derby Gardens Gladioli

	EACH	DOZ.
AMERICA - - -	\$.05	\$.50
BRENCHLEYENSIS	.04	.30
ISAAC BUCHANAN	.08	.75
CHANNEL IS. HYBRIDS	.06	.60
COLUMBIA - - -	.06	.60
MAY - - - - -	.06	.60
MAIZE - - - - -	.25	2.50
MRS. H. W. BEECHER	.08	.75
PACHA - - - - -	.08	.75
PRIMULINUS HYBRIDS	.06	.60
PRINCEPS - - -	.06	.60
MIXED HYBRIDS -	.05	.50

and other kinds on my list sent prepaid by parcels post to any zone. One of each of above list, prepaid, 75c. One dozen of each, \$5.00, by express collect.

Descriptive list on application, also wholesale list for growers and dealers.

John H. Umpleby, Lake View, N.Y.
R. F. D.

Dahlias

Select Varieties

My catalog, descriptive of over 200 of the best and newest DAHLIAS, has been mailed. If you have not received a copy, send for it.

For instance:—

Cactus Type:

Conqueror - 25c. Mrs. H. Randle 50c.
Dorothy Hawes 75c. Pierrot - - - 75c.
Johannesburg 25c. The Imp - - 50c.

Peony-flowered:

Beacon - - - 50c. Dr. Peary - - 25c.
Caesar - - - 25c. Geisha - - - 25c.
Phenomenal - - 50c.

Finest collection of Pompons in this country. Also Miniature Cactus, Decorative, Show, Fancy, Collarettes and Singles.

Riverbank Gardens

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SALE Complete bound copies of THE MODERN GLADIOLUS GROWER of Vols. I, II and III, with indexes, are now available. They aggregate nearly 575 pages and contain much useful information. Mailed to any address postpaid \$1.25 per Vol. or \$3.75 for the three.

MADISON COOPER, Publisher,
Calcium, N.Y.

For \$1.00 we will send postpaid, a set of 12 color plates, each 8½ x 15 inches, of the following varieties:

Panama, Niagara, Lily Lehman, Glory of Holland, Empress of India, Pink Beauty, Halley, Baron Hulot, Willy Wigman, Electra, America and Princeps.

These are all finished off in natural colors and are suitable for framing.

W. E. KIRCHHOFF CO.
PEMBROKE, N.Y.

I WANT YOUR NAME FOR MY MAILING LIST FOR THEN
YOU WILL WANT

CEDAR ACRES GLADIOLI

"Bulbs that Bloom"

SEND FOR BEAUTIFUL ILLUSTRATED BOOKLET, DESCRIBING MANY VARIETIES AND GIVING THE REAL TRUTH ABOUT EACH.

B. HAMMOND TRACY
CEDAR ACRES Box K WFNHAM, MASS.

Pymatuning Gardens

Gladioli



	<i>Dozen</i>	<i>Hundred</i>
America - - - - -	\$.50	\$2.00
Augusta - - - - -	.50	2.00
Blanche - - - - -	.75	5.00
Candidum - - - - -	1.50	
Chicago White - - - - -	.50	2.00
Dawn (Groff) - - - - -	2.00	
Dawn (Tracy) - - - - -	1.25	
Empress of India - - - - -	.75	
Glory - - - - -	.60	3.50
Glory of Holland - - - - -	.75	5.00
Golden King - - - - -	.75	5.00
Loveliness - - - - -	2.00	
Mrs. Francis King - - - - -	.50	2.00
Mrs. W. E. Fryer - - - - -	1.50	
Myrtle - - - - -	2.00	12.00
Niagara - - - - -	.75	5.00
Panama - - - - -	.75	5.00
Princes - - - - -	.50	2.00
Pink Perfection - - - - -	2.00	
Peace - - - - -	.75	
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Taconic - - - - -	.50	2.00
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GLADIOLI

EVERYBODY loves this beautiful flower with its wonderful combination of colors; gay if you wish, or delicate if preferred, but always enchanting. Any child can grow them. Plant a succession and have bloom from last of June until almost winter. They bloom bravely through heat and drouth, and do not mind severe frosts in fall.

We have gone to much labor and expense to collect 125 of the finest sorts from America and Europe. 25 of these cannot be obtained from any other American seedsmen.

Send for FREE Descriptive Catalog

which also lists 150 varieties of finest Dahlias, 165 varieties Iris, 150 varieties Peonies, as well as the best of everything in vegetable and flower seeds.

The Wing Seed Company

Box 1440

Mechanicsburg, Ohio

Souvenir Collection of Gladiolus Bulbs.

One each of ten choice varieties, fine assortment—America, Princepine, Crackerjack, Golden King, Halley, Taconic, B. Jos. Hulot, Empress of India, Panama, Mrs. Francis King.

Value 65c., by mail, postpaid - - - - 50c.

Two Collections, postpaid, **90c.** Three collections, postpaid, **\$1.25**

Winchester Collection.

This is a well balanced garden collection which always gives perfect satisfaction. Sent express collect on receipt of price—40 America, 26 Mrs. F. King, 16 Independence, 4 Taconic, 4 Willy Wigman, 2 Niagara, 2 Pendleton, 2 B. Hulot, 2 Peace, 2 Geo. Paul.

100 bulbs, (value \$3.00) price - - - - - **\$2.50**
50 bulbs, " 1.50 " - - - - - **1.25**

Send for Catalog. Place your orders EARLY.

Brookland Gardens

S. E. Spencer, Proprietor

Lexington St., - Woburn, Mass.

GOLDEN KING

AWARDED FIRST CLASS CERTIFICATE

Price of Golden King has been reduced so as to put it within the reach of all growers. Retail price 10c. each, \$1.00 per doz.

Send for our retail list describing nearly 200 of the better old and new varieties. All of our own growing at fair prices. Wholesale list for dealers and large growers.

We make a specialty of furnishing planting stock of the best new and standard varieties to other Gladiolus Growers, Florists, Market Gardeners, Nurserymen and all others who grow Gladioli commercially.

We recommend planting young $\frac{3}{4}$ to 1 in. blooming size bulbs and sell them very cheaply in lots of 100 and 1000 or more.

A special price will be quoted on a list of your wants if you will state size and number of bulbs of each variety wanted.

G. D. BLACK

GLADIOLUS SPECIALIST

ALBERT LEA - - - - MINN.

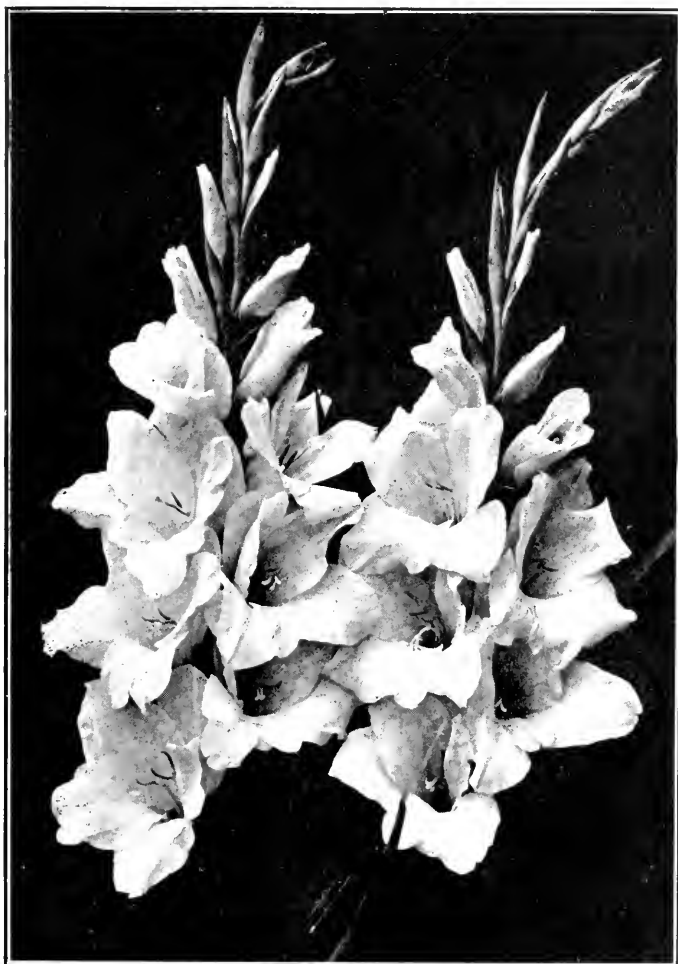
THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
Published Monthly by Madison Cooper, Calcium, New York.

Vol. IV.

MAY, 1917

No. 5



GLADIOLUS—LAVENDULA.

[For description see page 70.]

The Gladiolus Manual.

BY W. W. WILMORE, JR.

CHAPTER XIX.

Seasonable Suggestions.

JANUARY—It is time to look at the stock and see how it is keeping. If inclined to be damp, it should be turned over and dried out. Look for signs of frost and mice. If the old roots are still on, these can be removed in a manner already described. After this work is done nothing further is necessary for this month.

February—With February come the catalogs and price lists of other growers. Now is the time to provide for spring planting and secure those new varieties that we have jotted down in our note books. Don't wait until stock is exhausted before you order, you can have the shipment sent at any time but be sure you are going to get what you want. Look at your stock again and see that everything is in good condition.

If you are publishing a catalog get it out and in the mails and be ready to fill your orders as they come in.

March—Spring will soon be here. Get your stock in readiness to plant, sort your sizes and varieties so that you will be able to plant without delay when the opportunity presents itself.

Get your early orders out and see that the stock secured from other growers is on its way, provided you want it for early planting.

April—With the coming of April the frost is fast leaving the soil, and plowing should be done as soon as possible and the ground gotten in shape for planting. Should the areas be too small to plow the spading-fork should be worked diligently. Get the soil in a porous, mellow condition so that planting can be properly done.

First plantings can be made as soon as the ground is ready; even March plantings are advisable provided the stock can be planted in safety from late frosts that may nip the tender blades as they appear. Of course this advice is not given for warmer climates such as California and Southern States where planting can be done at almost any time of year. In these cases one can use their own judgment as to the proper time to plant. In fact, in some climates Gladioli can be planted almost any month in the year and

would live over from year to year without being disturbed as far as frost is concerned. Often the corms are left in the soil from year to year but this is not advisable on account of the propagation of the plant, and its ability to do its best after a period of rest by drying.

The plantings should be made at intervals for reasons given in previous chapters. Small corms and hard-shell bulblets should go in the ground as early as possible in order to give them a long period of growth. Also plant your Gladiolus seeds.

May—In large areas it is natural to suppose that May draws on before all the stock is planted, especially if the grower plants for cut flower purposes. In this case he lengthens the time of planting so that he will be able to cut blooms late in the fall. In this case the last planting will take place the last of May or the first of June.

The first plantings are now beginning to make an appearance and the rake should be used to smooth down the rows and kill the small weeds as they germinate. By the time the last of May has come we are ready to cultivate, using the harrow tooth cultivators first. Also employ the hoe, and above all do not let the weeds get a start. See that labels are in their proper location in the row. This should be easy if precaution is taken in planting by leaving a noticeable space between each variety where the label should stand in evidence. Should these spaces occur without a mark they should be looked after.

June—The entire month of June is spent in cultivation and watering. The large weeds that have escaped the hoe and cultivator should be pulled out by hand. Weed the seedlings by hand and use the hoe in stirring the dirt after the mulching has been removed as described in a previous chapter.

July—Cultivation is continued at least once a week but now the plants are large enough so that the shovel cultivators can be used constantly. It is advisable in localities where irrigation is not employed and the rainfall scarce to cultivate oftener.

This seems to retain the moisture in the soil and make it more porous to absorb water when it comes. At the end of this month we can expect our first crop of flowers and the cultivation is over for them. They are checked as to the bloom to insure correct marking, and the rogues pulled out.

August—This month is given entirely to checking and roguing, also cultivating the small stock, being careful to water as often as necessary. It is not necessary to advise the watching of new seedlings coming into bloom. This part takes care of itself but when a good one appears it should be labeled so as to separate it from the rest when digging.

Be ready to photograph those that you want to use for the catalog or other purposes. Remember a day's delay may mean a failure and another year's wait in order to get perfect specimens. This is the most important part of the photograph. If your subject is not good, the picture will not be good. Therefore, select the cream for this purpose. Handle them with care in taking them to the photographer so as not to bruise the flower and spoil the picture.

The ordinary photographer is not good enough to photograph flowers, his lens is not made for this purpose. In other words if the subject contains several spikes of bloom and they are placed in a vase in a natural way the closer ones will be prominent in the picture and those toward the back will look blurred. The commercial photographer is the man to do this work. His lens is made for this purpose and can take in a large scope that will be distinct. With a distinct photograph the engraver can make the cut without doing a lot of extra shading and painting to bring out the object as it should look, which at best is not good as compared with that of a proper photo.

I have found it better to cut the spike when first flowers open and take them to the office of the photographer to let them open. Then there is no chance to bruise or mar the flower. To show a flower individually is better than to show the entire spike. We can judge how the plant looks by the photo of the spike but to see the flower in detail is very difficult and is seldom the case. Therefore, my opinion is that the single flower is the proper one to photograph, then describe the spike rather than to photo the spike and describe the flower.

When colored plates are made the photo is painted in colors from the flower itself and used as a guide when the plates are made. If a flower contains two colors

there are two plates for the printer and the paper is run through the press twice. If it be of three colors three plates are made, one for each color, and so on.

September—After the middle of September the small corms can be taken up as they have about finished their growth and will hold to the cormels much better than if allowed to ripen in the soil. This work can start Sept. 1st, if much work is to be done. As soon as the frost strikes the crop it is time to dig all. The early ones should come out first, then on down the line to the finish. It might be advisable to dig the early crop first if it has been cut for the flowers, as this soon checks the growth and they mature at an early stage.

Give the seedlings and fancy varieties personal attention. Do not leave this work to inexperienced hands as it might cause trouble later. Dry the crop in the field if possible before storage. See that everything is correctly marked and together. After this the October snows begin to fall and the fall orders can be filled. By the middle of November we can close the cellars except for inspection now and then until January.

While the above suggestions are brief it is supposed that the reader has followed us through the preceding chapters where these points have been drawn out. It will be easy to look up any point from the headings of the previous chapters.

Gladiolus Corms Frozen.

One of our subscribers sent us a sample corm out of his stock which he believes was frozen during the cold spell in January. We beg to offer a suggestion that in every bulb storage cellar a thermometer be placed near the stock, preferably near the floor if there is much liability of variation in temperature. Guess-work should not be relied upon and often a cellar feels warmer during a cold spell in winter than it really is. It is dangerous to let the temperature go below 32°F., and you should be reasonably sure that you have a thermometer somewhere near correct.

Gladiolus Catalogues.

The Gladiolus catalogues this year are unusually good and those who are growing Gladioli should have a copy of all of them. They make a useful reference library, and there is some real good information on culture, etc., contained therein. It is not yet too late to secure these fine catalogues for reference.

Money in Gladioli.

As we go traveling up and down,
Through village, hamlet, country, town,
While speeding on in rushing car,
We scan the landscape near and far,
Glad when old scenes and friends we meet,
And sometimes new acquaintance greet,
We list to many a passing word,
And chance remark oft overheard,
Storing them by for future use,
These odds and ends of gossip loose,
Perchance to find some golden grain
In chaff of talk all light and vain.
Thus, as I listened unaware,
Some words seemed borne upon the air,
Eerstwhile exclaimed some passer-by,
"There's money in Gladioli."

"They grow and blossom, sure's you're born,
Just like the farmer's beans or corn,
As hardy as a Turnip, Beet,
Or Ragweed, growing neath your feet.
Just plant 'em and they're bound to grow
Whether you wake or sleep, you know,
It's just their nature thus to do,
And they can't help it, nor can you.
Just *plant 'em*, and your labor 's done,
Trust to the weather and the sun,
"I will sure surprise you, how they 'll grow,
Resplendent as the flowers blow,
And every spike will bring, when sold,
Almost its weight in solid gold,
For countless eager buyers wait
With longing, outstretched hands elate,
To gather them with gladsome cry,
"There's Money in Gladioli."

And then I listen, and look wise,
And with rough knuckle rub my eyes
To clear my vision, and look back
Over the long and weary track
Where vainly still I strive to see
The wealth that should have come to me—
But, Ah, it still eludes my sight,
The pictured scene is far less bright,
A path by toil unceasing, hard,
And disappointment often marred,
With broken idols fragment-strewn,
A song of sorrow still to croon,
Hopes unattained, and labor spent,
While, one by one, investments sent
Like ships upon a trackless sea,
Whence few have e'er returned to me,—
I see but that Ohio Lie—
"There's Money in Gladioli."

What! Money in Gladioli!
Oh, What a whopping, downright why—
A Half—a Quarter—of a cent—
Best spikes that e'er to market went,
And thankful, even to get so much,
Quite on a level with the Dutch,
And bulbs, that for a thousand, good,
Bring less than half-a-dozen should,
(At least of newer sorts), Alas,
That we should come to such a pass!
Returns are *nil*, and steep bills sent
While sore perplexed to pay the rent,
With ship-loads from beyond the sea,
And sellers crowding hungry,
How happy should we be the while
We listen with a crooked smile,
As some affirm, assert, imply,
"There's Money in Gladioli."

And yet, as I consider long,
Perhaps 'tis not so very wrong,
I'm sure that many shekels fair
That once were mine, are hidden there,
In vain I've tried to coax them back,
Once more to gather them,—alack—
Securely buried still they lie,
Much money in Gladioli.

But I've enjoyed the quest, I'm sure,
For a New White, "absolutely pure,"
Like Baking Powder, Ivory Soap,
With highest standards fit to cope,
A Blue, more azure than the old,
A Yellow, fair as Truscan gold,
A Red to put the sun to shame,
Hard task to find a fitting name—
All colors in a combination
Framed to incite to (s) peculation,
While the Blotch and Marking we may seek
With Mendel's Law play hide and seek,
Or, like the thimble-rigger's game,
Set all our swelling hopes afloat,
With dreams of beauty new and rare,
But when we grasp—*it isn't there!*
But, freak or failure, come what may,
We keep the trail from day to day,
Expecting still the *citric nous*,
Of grand ideals held in view,
The beauty—mayhap—by and by,
The "money" in Gladioli.

So while its glow the sunshine yields
To "rainbows in Ohio fields,"
Whose brilliancy and grace combine
To lure to their elusive shrine
New throngs of devotees, intent
To find where homage may be lent,
As each new wonder comes to view
We drop the old to grasp the new.
For what is lucre, when a prize
Like that is held before our eyes?
So, Freely, as in days of yore,
The streams of golden shekels pour,
And thus the saying verify—
"There's Money in Gladioli."
—Wilbur A. Christy.

Gladiolus—*Lavendula*.

[Subject of illustration on our front cover page.]

Originated by H. H. Groff and introduced by Arthur Cowee, Berlin, N. Y.

It is a most attractive variety with large, well-opened flowers of pale lavender shade with a large cream blotch in the throat.

It grows to a height of over 4 feet and is a rapid multiplier. At times during a hot season the petals become flecked with carmine and some think that this adds to the charm of the variety. This effect is, however, abnormal and is similar to what may be seen in some other varieties.

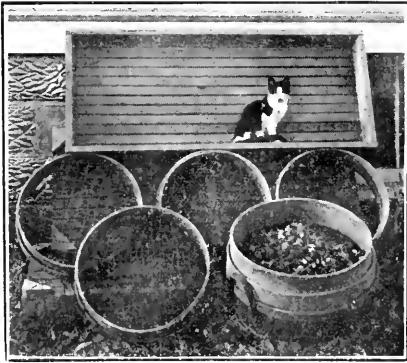
Meritorious varieties of a lavender shade are not plentiful and *Lavendula* may well be considered a valuable addition to this class.

Those who have grown Gladioli from seed are doubtless doing the same thing again this year. Those who have never grown from seed should try it this year. You can get seed from our advertisers or from your nearest grower. If you fail to secure it, write the editor. Growing from seed is interesting especially if from your own hand hybridized seed. The great range of color and the variety of forms which greet the eye as the new bloom unfolds is a source of never ending interest and pleasure.

MRS. AUSTIN'S TALKS.

WHY THE CAT ROBBED THE BIRD'S NEST
IN THE LILAC—WEEDING BULBETS.

"Now, 'Cape,' jump through the hoop and play you're a performing lion," and Caper jumped, much to the merriment of his little playmate who laughed gleefully as he scampered around her, apparently enjoying the fun as much as she. Seeing old "Nig" asleep on the sofa, he ran under it and slyly reaching his paw up over the edge, saucily struck at him, dodging back out of sight. Nig, aroused from his nap, yawned, stretched, jumped to the floor and waving his tail indignantly, walked sedately to the rug in front of the grate while Caper, with mischief in his



Mrs. Austin's screen graders and Gladiolus trays and her pet cat.

eyes, and moving his head with each movement of the tail, crouched low, made a dash for it but was struck at angrily. Dodging the blow he raced around the room a couple of times, caught sight of his own tail and whirled in pursuit dizzily rolling over on his back. Up again and sidling away with back arched, then pirouetting, a picture of dainty grace and a source of never-ending amusement to Mary, the little lame daughter of the farmer, who spent many happy hours playing with her pet that would otherwise have dragged slowly and wearily by. Caper was intelligent, quick to learn tricks, and when the child cried, expressed sympathy very plainly by rubbing his head against her and mewing pitifully. His mother, old Tabby, had been in the family a long time and had proved herself to be a most excellent destroyer of rats and mice, and had transmitted this trait to her progeny.

She was a masterhand at training kittens and seldom missed the opportunity to lead them to the field at time of hauling in the cornfodder. As the farmer tipped the corn shock over they would catch the scurrying mice. Once after a frolic with her kittens at the barn she started to the house and as they ventured to follow, turned and looked at them. She made no sound nor raised a paw but each kitten shrank back as if struck and crept to the nest.

Caper had become an expert hunter and so valuable that the farmer took special interest in him. He saw that he had his saucer of milk at morning and night and often some table scraps, and that he did not go hungry when mice and rats were scarce, feeding him at such times a cheap grade of salmon, for the cat is a carnivorous animal and craves meat even when she has plenty of milk. The farmer liked birds as well as cats and made houses and nesting places for them, and Caper had never been known to catch them, preferring rodents. So sleek and beautiful was he that he attracted much attention and one day an auto party picnicing by the roadside nearby, coaxed him to them, put him in a bag and carried him away. After several hours' travel the fastenings of the bag worked loose and Caper, thoroughly frightened, was off in a flash. In a panic of fear he ran toward the first shelter in sight, a barn, although he saw the strange dog. At home the barn was a place of safety and the collie his friend. But the face of this one showed a viciousness he had never dreamed of. Instead of a race for sport it was a race for life and he barely escaped those terrible jaws. Hidden at last he dared not venture out but he was faint and hungry and hearing a slight rustle which he hoped might be a mouse, turned and found himself facing a monster cat. Protected at home he was not prepared to fight and slowly backed away. At milking time in the morning he begged a drink but a strange voice said: "O, so you are the tramp that awoke us this morning. Sic'im, Sport," and again came the race for life.

Days passed, there were few mice. Cautiously he crept about the fields and hunted as he had never hunted before, for he was starving. A bird fluttered by as if wounded and at the same instant came a sound at his side, and at the edge of a tuft of grass he saw a nest full of young birds which he quickly devoured. A choice morsel but not nearly enough for so hungry a cat. In an agony of defense the mother bird fluttered too near and was

also caught. Never had food tasted so good. There were more birds than mice and he began hunting them, became bolder finally venturing even near the houses. Was it the memory of his early training, when he had been well fed, and had been punished for even looking at a bird, that caused him to utter the plaintive sound which warned and thus saved the life of the robin in the lilac from whose nest he stole the egg?

Not only for children and on the farm is the cat an entertaining pet. The farmer who retires from active labor and perhaps moves to town takes his cat with him. He has been accustomed to caring for animals many years on the farm, and he misses his horses putting their noses over the manger to be rubbed and petted. He misses the calves and cows and sheep. He cannot enjoy having a dog in town and crushing his noble spirit by keeping him muzzled, but he *can* keep a cat. It is company for him and becomes a pet, which not only lowers his high cost of living by saving his food from rodents, but in doing so boards herself.

In this age of automobiles there are few horses kept in the towns and cities, and with no grains the mice and rats must seek their living in the houses. If the cat is belled and its usefulness destroyed, there can be no doubt but that within a short period of time, the damage from rodents would more than equal the loss of crops and farm products ruined by insects that might have been eaten by birds, that some claim were killed by cats. In the hunting season thousands of birds are massacred by hunters for sport (?) but the cat kills only for food on which to subsist. Perhaps the cat is entitled to a few, but precisely as it is a law of nature that there must be enemies (not human enemies) to keep the birds in check so is the cat nature's agent to suppress rodents. She not only destroys a large number in quest for food but her presence also frightens them away where they are destroyed by other agencies. It is the starved tramp cat, and the neglected cat that, perhaps like the man-eating lion, acquires a taste for bird meat and hunts it in preference.

* * * *

We suppose that you planted the Gladiolus bulblets as early as possible in April (in northern Ohio) when the ground was full of moisture, and if according to our instructions, given many times, you sowed them thickly in drills which were covered and ridged, you have probably gone over them with the horse weeder or hand rake, according to the size of your plot,

and ridged them again and perhaps used the weeder the second time, as they should be gone over about once a week. When one sees the countless little white weeds which are destroyed he will realize the importance of planting in rows and the alternate ridging and leveling of them whether the plot be large or small. If they were stored slightly damp, so that the hard shells or outer covering will break easily they would nearly all come up at once, although there are always some stragglers. As the little green blades come through the soil, rake them lightly crosswise of the row with a hand garden rake. The rows may be worked this way a second time after which the few weeds that will come up afterward may be easily pulled by hand.

MRS. A. H. AUSTIN.

Definition of an Amateur by Ottawa Horticultural Society.

A prize list comes to us from the Ottawa Horticultural Society, Ottawa, Canada, from which we extract a definition which is interesting in connection with the discussion which has taken place in our columns on what constitutes an amateur. Please note the three sections a, b and c, all growers who can properly be termed amateurs. We are pleased to print this concise and sensible statement regarding the status of an amateur:

(A) The term "Amateur" used in its broadest sense, is a person who grows plants (flowers, fruits, vegetables, etc.) solely for the enjoyment, or for the domestic use, of the produce and not for the purpose of obtaining pecuniary benefit therefrom to the extent of a considerable part of, or, his total income.

Such persons may be:

- (a) Amateurs employing paid and regular assistance.
- (b) Amateurs employing paid and occasional assistance.
- (c) Amateurs employing no paid assistance at all.

The fact that such person does occasionally dispose of surplus stock for money does not disqualify him unless such surplus is definitely grown with the object of returning annual profit.

(B) No person shall be allowed to compete as an "Amateur" who:

- (1) intentionally grows for sale the plants mentioned above for the purpose of a livelihood.
- (2) is in the employ of other persons growing plants for such purposes.
- (3) is regularly employed for wage by those described as "Amateurs" in Section (a) of Class "A" above, or by any institution, public or private, which employs him as a regular and qualified assistant in horticultural work.

When the backward season is broken by a moderate temperature a satisfactory growing season may be looked for.

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Special favors to none, and a square deal to all.

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Growers are invited to contribute articles or notes over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.

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May, 1917

No. 5

*Gla-di'-o-lus is the singular of Gla-di'-o-li.
Correctly pronounced with accent on the syllable "di."*

"Money in Gladioli."

We are pleased to print Wilbur A. Christy's verses with the above title on page 70 of this issue. Mr. Christy takes a view which is quite opposite to that of some of our optimistic Gladiolus writers. It is very easy indeed to figure out how much money can be made in growing Gladioli, but it is noticeable that those who grow Gladioli do not get rich according to the figures.

Growing Gladioli is just as much a special business as would be the growing of any other crop and it requires the same special preparation and study. If a new beginner in the business makes a notable success of it the first year, he may attribute it to good luck rather than good management, and some of the oldest ones in the business have "off" seasons where conditions are wrong for good results. Therefore, it is wise for those just embarking in the business to not feel that they are going to get rich the first year. Caution should be used in starting to grow Gladioli by undertaking the business in a comparatively small way at first, to feel out the trade requirements, and to become familiar with the details of the business.

We very much dislike the expression which is often heard that there is "money in" this, that or the other thing. People who get this impression about any particular line of business are perhaps likely to find out as Mr. Christy's verses indicate, that there is money in the proposition because they have sunk a lot of money in it. Adequate returns from any business depend on a set of conditions which are influenced by good judgment, and circumstances, and conservative management. Care and attention are absolutely necessary in every line of human endeavor with which we are acquainted, to insure its success. Even with all these things, success does not always come.

The growing of Gladioli as a commercial proposition offers perhaps as good an opportunity as other lines of work, but no positive statement can be made as to whether or not it will succeed for any particular individual. Don't expect figures to be verified the first year. Growing Gladioli is not a sure thing, no more than growing potatoes is a sure thing, and I guess we all know about how the potato crop behaved last year.

War conditions may adversely affect Gladiolus growing. Who can tell?

MADISON COOPER.

Express Rates on Bulbs.

Gladiolus corms, which class as bulbs in shipping by express, should take second class express rate, but it has come to our attention that in many cases shippers have been charged the first class rate. We, therefore, call attention to the fact that bulbs take a low rate and both shippers and receivers should see to it that they secure this rate. Get a rate book from your local express agent if possible, or at least ask to see the tariff. All packages containing Gladiolus corms should be plainly marked "Bulbs," and during freezing weather, the words, "Keep from Frost" may be added to advantage. Thus the contents of the package are known to the express agent and he makes the rate accordingly.

We want to say to Gladiolus growers who grow commercially and especially those who grow for the wholesale trade, that THE MODERN GLADIOLUS GROWER is giving some surprising results in the way of selling wholesale quantities. We just had a letter from one of our oldest advertisers who says that he has made more wholesale sales from his advertising in THE MODERN GLADIOLUS GROWER this past winter than at retail. Some of our advertisers seem to think that THE MODERN GLADIOLUS GROWER reaches amateurs mostly. They would be surprised to see the numbers of letters coming into this office using printed stationery showing that the writer is in the business of growing for market.

That there may be no need for wrong use of the plural and singular form of the word used to designate the beautiful flower to which this publication is devoted, we have placed at the head of our editorial column a little note which can be used as reference at any time. We intend to run this regularly, at least for the present. It is quite surprising how few people know the correct use of the singular and plural of the word Gladiolus. We want to give them a chance to learn if they are so disposed.

Don't Worry About

Gladiolus Corm Disease.

One of our subscribers asks the question why there is so much talk about disinfecting diseased Gladiolus corms and this was partly answered editorially in the March issue. We honestly believe that there is altogether too much talk about it considering the fact that disease is not prevalent to any great extent. Some growers are greatly agitated and bothered certain years and the next year their troubles apparently largely disappear. Our own experience is varied, but we have never had any serious trouble from disease, and we have never used any treatment for diseased corms before planting. Considering the fact that we have had corms from all over the world, pretty nearly, and many of them more or less diseased (some of them indeed very much "more") it would seem that with ordinary precaution in planting, culture and curing that disease will gradually eliminate itself rather than become worse.

MADISON COOPER.

The tendency toward planting for food supplies instead of flowers will doubtless have considerable influence on the growing of Gladioli during the season of 1917, but we do not look for the war to continue long nor to be as serious a matter to this country as many people seem to think. While it is all well enough to be economical and grow foods and help the world shortage, yet we should not forget our love for the beautiful, and the growing of flowers is not an extravagance in any possible definition of the word. Those who want to economize should hunt out the really useless wastes and expenditures for those things which are not only useless in themselves, but a positive detriment to the individual. Flower growing is an education in itself and a development of the spiritual and higher side of humanity. Cut out the foolish things but do not consider flower growing as one of them.

Cold Storage and Flowers.

From *Ice and Cold Storage* (England.)

TO THE man in the street the idea of employing cold storage in connection with the care and culture of flowers would appear absurd. He knows very much better; if he has a garden he knows that flowers bloom only when the sun shines; he knows also that all kinds of heating devices are employed by florists to bring the flowers on, so as to bloom earlier than they would in the open. Some of the most beautiful flowers, as is well known—orchids for instance, and a few roses and others—will only bloom in an atmosphere whose temperature is maintained continuously at a fairly high figure. Frost, too, he recognizes as the great enemy of the flower grower; it is frost that often throws back his roses, when they have been coming on rather early owing to a mild winter, and it is frost that strikes his lovely cactus dahlias as with a blight. It seems absurd, on the face of it, to talk of low temperatures in connection with flowers, and yet, as refrigeration engineers know, cold storage is making steady headway in the great industries of floriculture, and horticulture. For a good many years now, that sweet little bloom, the Lily of the Valley, has been seen in florists' shop windows the whole year round—though its proper time of blooming is in the spring—and florists are able to accomplish this by the aid of cold storage. The young plants are taken out of the ground just about the time when they would begin to push their first green shoots above ground, and are placed in boxes in cold storage, the temperature maintained being considerably below freezing point. When blooms are required, the plants are taken out of the cold store, and either placed in soil, or moss fibre, in pots indoors, or in the soil out of doors during the summer, and the blooms appear in from three to five weeks. Numerous bulbs are transported annually from Japan and elsewhere to this country, the bulbs being kept at a low temperature during the voyage, and many of them are kept in cold store on arrival until they are wanted; the blooms being obtainable in from four weeks to three months after removal from the cold store. But this, useful and profitable as it is to the florists who have taken advantage of it, is only a small part of the work that cold storage will do to assist the florist.

Horticulture and floriculture are both wonderfully interesting in themselves, and large sums are made by those who are skilled in them, and have capital at their command; but there is a very large element of uncertainty about them. Both are largely encouraged by the shows that are held during the summer and autumn in all parts of the kingdom; a prize for a perfect bloom of a particular flower, or the exhibition of an entirely new bloom, usually bringing numerous orders at good prices. But here is where the element of uncertainty comes in, and where cold storage will assist to neutralize the uncertainty, if properly employed. With the greatest care, blooms of particular flowers sometimes come forward too quickly—and this applies both to flowers grown in the open and under glass—and is due to the uncertainty of our climate. The sun will be behind clouds for days, and it will appear as if a particular bloom will take some days to mature, and then the sun will shine out in full brilliance for several hours, perhaps right on the greenhouse, or on the flower if it is in the open, with the result that the bloom may be so far forward as to be *passé* on the day of the show, and the careful work of months at least, perhaps years, may be lost. It is here that the cold store comes in; if the plant is caught, so to speak, before the process of maturing has gone too far, and is removed to a cold store, especially arranged for treating plants under these conditions, the process of maturing may be retarded for as long as the florist chooses, and it may be brought out of cold store, in sufficient time to completely mature it for the show, so that it may appear before the judges at its very best. And this applies not only to plants growing in pots that can be removed into a cold store in their pots, but also cut flowers. Everyone knows how quickly cut flowers go off, under ordinary conditions, after removal from their plants; probably most of us have noticed also how many of the cut flowers exhibited in flower shows go off on the second day, sometimes even on the afternoon of the first day. They are cut in the early morning usually, their stems are kept in water, and at some flower shows one sees an attempt made to keep their stems by the evaporation of

[Concluded on page 78.]

WAYSIDE RAMBLINGS.

GLADIOLI IN MISSISSIPPI.

In this hot sun-smitten climate, (Mississippi) many of your cultural directions are utterly worthless, especially those about planting corms for the purpose of having a succession of blooms until frost. That is impossible in Mississippi. After the middle of July the sun is so intense that it blisters every spike, no matter how carefully watered, and dwarfs the blooms besides. Moreover, I find the best way to get a succession of blooms is not to plant a succession of corms, but plant varieties that bloom at differing intervals.

Thus I depend for the first blooms on *Pink Beauty*, then comes *Halley*, then *Mrs. Francis King*, then *America* and finally *Princeps*. If these bulbs are planted about the latter part of March or the first part of April they will furnish a succession of flowers from about the 10th of June to the 10th of July. Corms planted late as the first part of May bloom, but they are weak and the flower-spikes are inferior. I find also that *Klondyke* and *Lily Lehmann* and *Mrs. Pendleton* bloom just a little bit later than *Halley*, while *Baron Hulot* and *Pink Perfection* are in bloom with *America* and *Niagara*.

While we want every Gladiolus that is awarded a prize, I find it best to rely on the old favorites for a sure crop. Of course, I try many of the new ones by way of experiment. They are lovely but expensive and not lovelier than some of the old ones.

My advice to those who wish flowers would be to plant but few varieties but plenty of each. Indeed, I believe it would be good policy for Southern growers to confine themselves to the following varieties: *Halley*, *Mrs. Frank Pendleton*, *Mrs. Francis King*, *America*, *Baron Joseph Hulot*, *Brenchleyensis*, *Lily Lehmann* and *Niagara*.
T. DABNEY MARSHALL.

CORN WORMS.

I have seen nothing in THE MODERN GLADIOLUS GROWER about corn worms. Last July I planted two fields with about 240,000 *America* for the late market and the corn worms devoured nearly every bud before they showed color. I did not cut 150 flowers from the lot. I do not know how to combat this pest. If anyone can give me suggestions would be glad to have them do so.
CARL D. HALE.

CORROSIVE SUBLIMATE TREATMENT FOR
GLADIOLUS CORM DISEASES.

Several years ago when I had considerable scab or disease on my Gladiolus corms I treated them just as you would treat disease on scabby potatoes, using corrosive sublimate at the rate of two ounces to fourteen gallons of water. The corrosive sublimate should first be dissolved in a small amount of boiling water in a glass or earthen cup or crock as it will cut or corrode any metal utensil. After dissolving add the corrosive sublimate to 14 gallons of water. Soak the bulbs 90 minutes in the solution. I use a large barrel and twice the quantity of solution given above. The bulbs may be put in a sack and with a pulley in the ceiling to lower and hoist them, they can be conveniently handled. They are allowed to drain in another tub so as to facilitate the use of the solution. Treat the day before about the quantity that can be planted the next day. After two years' use of this treatment I have never been bothered with scab or disease. Old crates which have had diseased corms in should be dipped in the solution to free them from the disease germs as it can be carried over in the old crates.

P. O. COBLENTZ.

MISPELLED GLADIOLUS NAMES.

Two names of Gladioli are usually misspelled. One of these is *Gov. Hanly*, named by permission for ex-Gov. Hanly of Indiana. The incorrect spelling is *Gov. Hanley*, adding an "e" which does not belong in the name.

The second is *Red Amarillas*, named for its near resemblance to the *Amaryllis*. The spelling was changed from *Red Amaryllis* to *Red Amarillas* with the view of having people know when they see the name *Red Amarillas* that it could not be an *Amaryllis* but must be something else.

ANTHONY B. KUNDERD.

GLADIOLUS CORM GRADERS.

I want to say in connection with the article referring to Mr. Swett's graders in April number, that I have used round hole graders for some time. Had a tinner stamp holes in sheet of tin $1\frac{1}{2}$ in., 1 in. and $\frac{3}{4}$ in. The $\frac{1}{2}$ in. screen I use is of square mesh. I believe the pig skin grader would be better, or any tough skin stretched on a frame, and holes punched, or the makers of seed graders could supply the Gladiolus growers with different sized screens. Let's hear from someone else.
JOHN B. HUMPHREY.

A REAL AMATEUR'S EXPERIENCE.

TO THE EDITOR:—

I have read all THE MODERN GLADIOLUS GROWER has had to say about what constitutes an amateur, and I have smiled and smiled.

This letter shall be called "The Confessions of an Amateur,"—wherefore listen:

I began my career as a grower of the Gladiolus a bit more than fourteen years ago when a neighbor gave me a handful of corms to put in my first garden in a new home. There were, possibly, a dozen,—two colors, red and pink, and of the old-fashioned small flowered type. That they might not be lonely, I bought a dozen of mixed bulbs to put with them, and so my Gladiolus bed was started.

From year to year I bought a few new bulbs, mixtures mostly, with now and then a low-priced collection of named varieties. The year that *America* was first advertised I bought one corm, at a price that was most reckless extravagance, I thought then. The blossom was a wonder, though, but not so great a wonder as one that bloomed from among my mixed varieties. Where I got it I never knew, and it certainly was a queen disguised as a beggar maid, for most of my mixtures at that time had been poor and unsatisfactory from my later point of view. But this one bloom was as large as *America*, of the rounded form of *Golden King*, and of as great substance, while the color was a deep solid maroon, with a sparkling surface as though it had been sprinkled with diamond dust. I have never since seen anything like it, for though *Geo. Paul* is somewhat similar in color, it is far inferior in every way. Unfortunately, I was ill that fall, and could not attend to the gathering of my bulbs, which were not dried out enough, packed too closely, and many of them rotted in storage. The *Marvel*, as I had named my unknown beauty, was among the ones destroyed, doubtless, for it never bloomed for me again. It had done its work, however, by showing me what a wonderful thing a Gladiolus bloom could be, so that I began buying better varieties.

Seven years ago I again got surprised by a mixture which scattered through my collection a variety that makes corms and cormels to an extent that makes all other sorts look like race suicide, but *never, never* blossoms. I had planted these corms with all their increase two years, before I awoke to the fact that they were simply playing "dog in the manger," as it were, and the five years

since has not sufficed to get rid of them all. This year, however, I shall be wholly relentless, and everything which fails to show a bloom, goes into the discard.

I have given away many bulbs, discarded others as worthless, lost a few now and then, as they apparently "ran out," and have never had more than 700 or 800 bulbs at any one time. One day, four years ago last August, a local florist happened to pass my home and stopped to admire the display my three double rows of Glads in the height of bloom presented. He asked me if I would sell some, and carried away three dozen spikes of blossoms for which he had paid me five cents each. I had given away armfuls of flowers, year after year, and should doubtless have given away those very ones, so it was just like finding money. Each year since then, I have sold a few dozen spikes, only to put the money into new bulbs.

According to some of the debaters, this sale of blooms put me out of the "class of amateurs," and that is why I smile, because whatever they finally decide, I shall still be "the lady with the flower garden," as the children call me, putting out my bulbs, watching each prick through the soil, knowing every plant by heart, and finally cutting armfuls of bloom for the hospital and the neighbors, and if the florist comes and gets a few for a funeral spray or wedding decorations, I'm sure I shall be just as "amateur" as ever.

E. H. P.

PROMOTING INCREASE OF GLADIOLUS
CORMS.

An old gardener says that if you have a rare bulb that does not produce bulblets, to dig down after the leaves are up a foot and gently scratch its sides until the skin is broken in various places, that this will induce the formation of bulblets. He also says the roots can be changed into sprouts by cutting the bulb in half crossways (horizontally) and planting the bottom half upside down in sand, thus exposing the root surface to the light. The roots will sprout in large numbers and each will produce a small bulb. The upper half of the bulb may be forced like a perfect bulb.

C. M. S.

Westerbeek & Klyn

Locate in the U. S.

The announcement that the Cushman Gladiolus Co., of Sylvania, Ohio, has sold their entire stock to Westerbeek & Klyn,

Sassenheim, Holland, appears in our advertising pages.

Last season the Cushman Gladiolus Co. grew a large quantity of Gladioli for Westerbeek & Klyn and finding the American grown stock cleaner and better looking than the Holland grown and also owing to the present disturbed conditions of shipping from Europe, they decided to grow their stock here. Arrangements have been made with Mr. Ralph Cushman to continue for them the growing of leading varieties of Gladioli and all planting stock for propagation will be moved to one base in America and grown here for the American trade. This will put Westerbeek & Klyn on an even footing with American growers and in addition to Gladioli, they expect to add the growing of peonies and dahlias and other stock as demand calls for it.

Under the new arrangement Westerbeek & Klyn expect to be able to satisfy their customers in this country perfectly and those who have already dealt with this firm are aware of their liberality and promptness in business methods.

Cold Storage and Flowers.

[Continued from page 75.]

water with which moss is soaked, the stems being surrounded with it. We suggest that better results would be obtained if the blooms were cut a very little before maturity, and kept in cold store till the very last minute. We suggest also that the committees who organize flower shows would do well to call in the assistance of refrigeration engineers to help them keep the marquees cool. It would be much fairer to the exhibitors, and much pleasanter to the visitors, if the temperature of the marquees were maintained at about 50°F. or even less. The blooms would maintain their freshness very much longer, and it would be quite a pleasure, instead of the task it sometimes is to the lover of flowers to go through the whole of them.

We have introduced this subject, as it appears to us that there is a very wide field for refrigeration engineers in connection with both floriculture and horticulture in the future. At the present time, while the war is on, flowers are more or less of a luxury, though they are very comforting in a hospital ward, or in a sick room anywhere. The war must end some time, however, and then there will be the difficult problem of finding employment for the large numbers of returning soldiers who will not care to go back to indoor work, and for the

large numbers of women whom the returning men will displace. Already, before the war, educated and cultured women had taken up both industries with considerable profit to themselves, and it is more than probable that large numbers of both sexes will take them up after the war. If they have cold storage apparatus, as well as heating appliances and electric light, they have almost complete control of the conditions under which flowers can be successfully grown and marketed. Cold storage should do for florists what it has done for fruit growers in America, enable them to hold their produce back when the market is glutted.

But, as with many other problems that refrigeration engineers have tackled, there is a great deal of work to be done. Florists and horticulturists know that every plant requires to be studied separately, and similarly the best conditions for each plant in cold storage will have to be studied; the best temperature, and the best humidity. It will not do to put any flowers into any atmosphere and to imagine, because it is a cold store, that the flower will be preserved. Obviously, flowers growing or cut, must not be frozen, and equally obviously, it will not be wise to subject them to a drying air current. Dry air, it will be remembered, is already responsible for lessening the weight of some produce in cold store, by reason of the evaporation it causes; much evaporation would be fatal to most flowers.

Send Bill with Goods.

Gladiolus growers as well as many other people who are engaged in merchandising, are slow about sending bills for goods shipped. Years ago a bill was considered a dun, but in this enlightened age this is not so, and any business man wants to see the bill with the goods or before they arrive. It is necessary to have the bill in order to check the goods accurately. We, therefore, suggest that Gladiolus growers mail bill at time of shipment in all cases. Whether goods are paid for before shipment or after received makes no difference. If paid for they should be accompanied by a receipted bill or memorandum of shipment.

Catalogues and Price Lists.

E. M. Smith, East Hartford, Conn. Retail catalogue and price list of Dahlias and Gladioli.

Wilmore Floral Co., Box 1111, Denver, Colo. Sixteen page catalogue of Gladioli, Dahlias, Hardy Perennials, etc. Well illustrated and with good descriptions of varieties.

Iris Culture in Southern California.*

By MRS. J. J. DEAN.

Mr. President, Ladies and Gentlemen:

While we have been making a special study of the Iris for several years, we find we still have much to learn, and it may be some of your members are better posted on the subject than we are, but if we can interest some who have not given the Iris much thought and attention, particularly in some of the species and varieties not commonly cultivated, perhaps the few minutes of your valuable time we occupy will not be entirely wasted.

You have all doubtless heard the Iris called Lily, Flag, Fleur de Lis, Poor Man's Orchid; also that the name in the Greek signifies rainbow. Botanically, we are told, the Iris is closely related to the Lily and Orchid, and the prismatic colors of the spectrum are well represented with their different tones, and intermingling of shades and tints of different colors, with a great variety of markings.

We find many people are familiar only with the more common forms of the Germanics, perhaps the Spanish and English Irises, and also some of the Japanese hybrids. To many it is a surprise to learn there is such a great variety of species and varieties, and new ones being found and a great number of choice hybrids being added every year.

We owe much to the knowledge we have gleaned on the subject from that valuable and quite recent work on the Iris Genus by W. R. Dykes. This work is the result of an attempt to find plants that would flower in the open in winter months in Surrey. The fascination of the first flowers led to an interest in the whole genus, and it soon became apparent that the knowledge of it was defective, and so a thorough study was begun. Not only all of the literature to be obtained on the subject was investigated, but the herbarium specimens of Europe, as also a Chinese collection and specimens from our National Museum at Washington were examined. So, from a study of the living plants, literature and herbarium specimens, we have this splendid monograph of the genus.

The earliest written history of the Iris was found to be at the beginning of the sixth century A. D., but it was not as a

garden plant, to be cultivated for its beauty, that the attention was called, but to its supposed merits as a drug. The rhizomes were to be cut in pieces and dried, and their healing virtues are many. Among them we notice they were recommended to remove freckles. Had they said the cultivation would produce freckles on the grower, we could verify the truth of the statement.

They are natives of the North Temperate Zone—both in the colder portions as well as in the milder. Some are found at great elevation. One in Northwestern China and Thibet is found at an elevation of seventeen to eighteen thousand feet. A clipping sent us by a friend says "Iris plants grow in Thibet 15,000 feet above sea level, and in such masses as to look like sheets of purple." One at least on this continent is found in Labrador and one in Alaska.

The genus is divided into bulbous and non-bulbous. The largest sub-division among the non-bulbous or rhizomatous, contains those species in which the center of the falls remain smooth, or is at least only covered with a slight pubescence. The name Apogon is applied to this group, and they occur over the whole area in which Irises are found.

An interesting group of this section is the Siberian, natives of Eastern Asia for the most part; one is quite widely distributed over the continent of Europe, and one, *I. prismatica*, is a native of our Atlantic Coast from Nova Scotia to North Carolina. They possess a grassy foliage, and the narrow rhizomes are much branched, producing a dense mat of fibrous roots. Within recent years several very valuable additions to this group have been discovered. They do well in a somewhat shady position, in a soil rich in humus, and plenty of moisture—conditions which would be almost fatal to most of the Bearded Irises.

The Irises known as Japanese are hybrids, but their origin is unknown. That is, no record of the wild species from which they were produced is known to exist. They require culture similar to the Sibericas. In Japan they keep them comparatively dry in winter, and fertilize with strong liquid manure every two or three weeks, and in summer when growth is active, water very liberally.

* Address before the Los Angeles Horticultural Society.

The Spuria group is a very valuable one, particularly in the best forms. They do well with the same treatment as the Bearded Irises, but will endure much more moisture without injury. They are distributed throughout Europe and Asia as far east as Kashmir. The plants are very ornamental with their tall, dark green foliage. The flowers resemble the Spanish Iris in form more than the Germanica type, and are very ornamental and also useful as a cut flower. While there may be quite a few grown in the private gardens of Los Angeles, we have never noticed any, nor have we seen them in the florists' windows. They appear to be cultivated more in the northern part of the State around San Francisco. At the May Flower Show there last Spring there were several good displays of them, and we also noticed them down town in the show windows.

We also have in this section the Water Iris or Yellow Flag, *Pseudo-acorus* of Europe and Asia; and our American *Versicolor* (syn. *virginica*), closely related to it. Mr. Dykes says they will both grow in dry sand, but they naturally prefer a wet or damp soil, and being natives of marshy land, are particularly adapted for growing in ponds. *Pseudo-acorus* is yellow, while *Versicolor* is some shade of blue or red-purple. The former is distributed over the whole of Europe, as far north as Scandinavia, and it extends also to North Africa, Asia Minor, and as far east as the Caucasus, and even possibly into Siberia. The latter extends from Hudson Bay in the North to Florida in the South and as far west as the Mississippi. While they are aquatics they do well with us in our heavy mesa soil with the same treatment as the Sibericas. Being so widely distributed it would not be strange if they varied somewhat. Two or three years ago we had some plants sent us from Europe that were supposed to be one of the Spuria group—at least they were ordered as such, and catalogued and labeled as such. The shipment was heated enroute, and the greater portion was a total loss, the few rhizomes we saved were in bad condition. Out of this particular variety referred to we saved but a few and of these only two lived. They did not look at all to us like Spuria rhizomes, but in their condition it was difficult to determine. As time went on the rhizome had the appearance of the *Pseudo-acorus* but the foliage was very difficult from any of the forms that had come under our observation. In color the foliage is of a dark dull yellowish or cross green, not so gray as other varieties, also

instead of the plant becoming dormant for a short season it is an evergreen plant, and further, under the same conditions, it attains a much greater height. The tallest leaves are some five feet tall and the flowering stem four feet and over. If grown in water the height no doubt would be greater. It is a very ornamental plant even when not in bloom. Naturally it makes an unusually large rhizome and also increases quite rapidly. We had another form sent us for *Aurea* of the Spuria group at one time. These rhizomes sprawl over the ground in an irregular manner and the foliage is not always erect but apt to grow at an angle, so that it is not a particularly pleasing plant, and while the flowers are good the stems are short.

There are several other groups in this section which are worth cultivation and particularly adapted to wild flower gardens. Among them is an American group, *Hexagona*, *Foliosa* and *Fulva*, semi-aquatics, that are desirable, and our Californian group should receive more attention.

There is one other group we would like to call your attention to before leaving this section, and that is the *Unguicularis* group, more commonly known as *I. stylota*. This Iris is too valuable for Southern California to be passed by unnoticed. It is a native of the Mediterranean coast countries principally, and appears at home under our conditions and mild climate. There are several varieties of this species. Nearly all we have cultivated are good, although some are more to be desired than others. One exception is *I. Lazica*, a variety said to be native of the west coast of the Black Sea. Maybe it will do better in a colder climate than ours, but it has not been at all satisfactory with us. Some of the forms come into bloom in the Fall of the year and bloom continuously for several months—that is, well established clumps. Other varieties do not begin to bloom until about the first of the year. They all have a narrow grassy foliage, which varies in both width and length in different varieties. The foliage is evergreen, but instead of standing upright, droops gracefully, so that the plant is ornamental throughout the year. They do well given the same treatment as the Germanica type. The color is white with yellow band in fall, and also different forms of blue and purple. The soft lilac-blue forms are particularly pleasing, and the veinings on the falls very marked. It seems difficult to conceive how any one who admires flowers would not be pleased with this pretty winter-flowering Iris. The fragrance, too, is most delicate and pleasing, probably more

so than any of the genus. There is one peculiarity about this Iris, and that is it has a very short stem, but the flower is raised on a long perianth tube, varying under different conditions and in different varieties, but averages eight inches or so, sufficiently long to make it useful as a cut flower for table decorations, although instead of cutting in gathering it should be pulled. One variety we have makes a much longer stem or perianth tube than the others—twelve or fifteen inches—but it is weaker and does not hold up the flower so well. In form the flower resembles some of our native Californian Irises, but the petals of most varieties are broader, the expanded flower of some varieties are often four inches in diameter and even more.

Time will not permit us to speak of the *Onocoryllus* and *Regelia* sections, nor the *Evansia* among the non-bulbous, neither can we stop to glimpse at the interesting bulbous section, as we must briefly call attention to some of the *Pogoniris* or Bearded Irises, including the *Germanicas* and others closely related. These are the easiest of cultivation perhaps, taking all things into consideration, and being among the most decorative, naturally attract the most attention.

In regard to the native habitat of the different species or varieties, little is known in regard to their origin. The tenacious hold the fleshy rhizome has upon life, adds to the complication. They are distributed over Central and Southern Europe, North Africa, through Asia Minor and Persia, and to China and Northwest India. None are known to be indigenous to our Continent, although some have escaped from cultivation and become naturalized in several places. One variety, it is said, that is the commonest semi-cultivated Iris in Southern France, where Irises are grown in such very large quantities, is also found in some parts of Nepal. *Albicans*—the white *Germanica* common with us—is found in Spain, in the Caucasus, in Mexico, Sicily, Greece, Asia Minor and Persia. It is said to be planted much by the Mohammedans in their cemeteries, which no doubt partly accounts for its wide distribution. *I. Kharput* came from a place of that name in Turkey. It is also growing in a certain locality in Nepal.

The *Germanica* group of this section, because of their evergreen foliage, are supposed to be natives of a mild climate. Many others of the Bearded Irises are also often called *Germanica*, but they are not so strictly speaking. The *Pallida* group, for example, differ very much from the

Germanicas in flower and foliage. *Pallida* means pale, although a few in this group are not pale. One distinguishing feature is the spathes—they look like tissue paper, is often remarked. The typical *Pallida* and many forms have long stems and some of the choicest and most delicate colors are found in this group.

We have the *Variiegata* group, found in Austria and Hungary, with yellow standards, and falls more or less penciled with brown and black, and the group now contains a great many hybrids.

In the *Amoena* group we have the white standards with various blue and purple falls; while the *Neglecta* group has standards and falls of blue or purple or lavender.

In the *Squalens* group the standards are a mingling of color and what we call in fabrics, changeable. The falls are darker as a rule, usually velvety, and come in purple, crimson-brown, etc.

The Irises in the *Plicata* group are supposed to be of hybrid origin. They are very delicate and pretty white flowers delicately veined and marked with blue, violet, purple, etc.

A few years ago an artist of Guernsey, Mr. Caparne, produced a good many hybrids—crosses between the dwarf varieties and the *Germanicas*. He said they would furnish bloom for from six to nine months in the year. Some he styled "Early Alpine," others "Intermediate," and others "Tall Summer Flowering." As he did not follow up the production and sale of them himself for but a short time, no doubt many of them have been lost, but some still appear in the catalogue lists of Intermediates. There is a good variety in color and they are very desirable. It appears to us they are particularly good as ground covers, for borders, etc. Like the dwarf varieties they multiply very rapidly and in order to get the best results the weaker growths should be removed occasionally, giving the flowering rhizomes a better opportunity to get nourishment, and if so treated will bloom much oftener.

There is also a large variety of Dwarf Irises, and they contain nearly as great variety of color as the *Germanica* type. We cannot go into detail regarding the different species. They are free bloomers and also suitable for borders, ground cover and the rock garden.

There is one other small group among the large flowering Bearded Irises we omitted to mention. They are called the *Asia Minor* or *Syrian* group. These have been used in producing some of our choice large flowered hybrids. They are all tall growing and have branched stems. There

has been some confusion in getting them named correctly by the introducers, but Mr. Dykes has done much to remedy that difficulty. Trojana has for some time been catalogued by growers as Cypriana, but is now listed under its correct name. The varieties we have are very satisfactory. They are very distinct from the tall growing Pallidas as you can readily see from the specimens we have here.

In regard to the cultivation of the Bearded Irises, it is so easy that some cannot realize it, and in their effort to get best results, kill their plants with kindness. It should be remembered they are sun-loving plants, also that they are not bog plants as we sometimes see it stated. The only difficulty in growing them in full sun in our climate, where the night and day temperature varies so much, is that the foliage is more susceptible to disease than when partially shaded. A spray for this disease of the foliage is suggested, viz: sulphate of potassium (liver of sulphur). Use one ounce to two or three gallons of water. Also the rhizomes must not be planted deep, and they must have good drainage, and another important point is that if fertilizer is used it is very important that the manure is old, thoroughly decomposed, fine and well mixed with the soil, otherwise decay of the root will result. As to how much water to give them, it is better to under-water this form of Iris than to over-water. They will make one crop of bloom without any artificial watering, but by judicious watering we get better results. Naturally they require more water during the flowering season, and after sufficient should be given to keep them in good healthy condition in our dry season, although a short rest during the summer is probably better for them. If the rains are late in coming in the fall, they should then be watered again, and some of the Dwarfs, Intermediates and Germanicas, and many of the other groups, will furnish quite a crop of bloom. The foliage should not be cut back except when replanting, but should be removed as it becomes unsightly, also the flowering stems should be cut out when through blooming. The best time to plant is immediately after they have finished blooming, as it is then the rhizomes throw out their new roots. When the rhizomes become crowded, so that they begin to overlap and prey upon each other, the plants should be divided. When you lift your plant do not break up into small rhizomes, but rather make quite large divisions, and by planting reasonably close together, you will have a good crop of bloom the following season.

The Dwarf varieties require a space some ten inches in diameter—some few less. The Germanicas about fifteen inches in diameter, while the very large varieties should be allowed more space—say two feet.

It is not to be supposed that every one will care to cultivate the Iris, but they should be much more in evidence than they are in our gardens, and their beauty more appreciated.

Statement of the Ownership, Management, Circulation, etc., required by the Act of Congress of August 24, 1912, of THE MODERN GLADIOLUS GROWER published monthly at Calcium, N. Y., for Apr. 1, 1917.

STATE OF NEW YORK }
COUNTY OF JEFFERSON } SS:

Before me, a Notary Public in and for the State and County aforesaid, personally appeared Madison Cooper, who, having been duly sworn according to law, deposes and says that he is the Owner of THE MODERN GLADIOLUS GROWER and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher—Madison Cooper, Calcium, N. Y.
Editor—Madison Cooper, Calcium, N. Y.
Managing Editor—Madison Cooper, Calcium, N. Y.

Business Manager—Madison Cooper, Calcium, N. Y.

2. That the owner is Madison Cooper, Calcium, N. Y.

3. That the known bondholders, mortgagees and other security holders owning or holding 1 per cent. or more of total amount of bonds, mortgages, or other securities are:

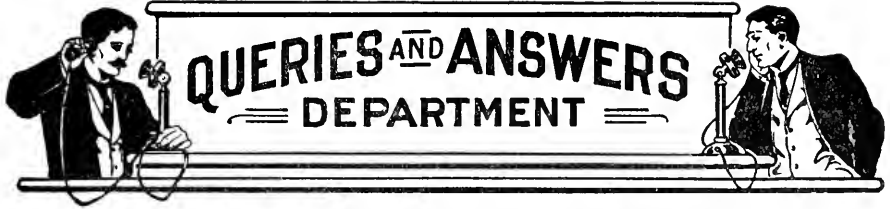
None.
4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

(Signed) MADISON COOPER.

Sworn to and subscribed before me this 22nd day of March, 1917.

[Seal.] (Signed) C. HOWARD GREENE.

(My commission expires March 30, 1919.)



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Gladioli on Same Ground Continuously.

TO THE EDITOR:—

Will you kindly tell me how long you can successfully raise Gladioli on the same ground?

Also if you crop the ground with something else one year, can you return to Gladioli?

MRS. W. A. E.

Answer:—In Holland they grow Gladioli on the same ground year after year and we understand the same varieties in the same place. However, this is not considered the best practice and it would be most desirable to have two yearly crops between each single year's crop of Gladioli. In other words, a field with a crop of Gladioli this year should be planted in other crops for the two succeeding years. Gladioli each alternate year will give satisfactory results. A crop of rye and vetch plowed under one year in advance of planting Gladioli would be very helpful, or clover sod would also be good.

The plan, of course, applies to commercial growing of Gladioli but the same general statement would be true of growing in a small way. Our method in the garden, although we have not lived up to it entirely, is to grow vegetables one year and Gladioli the next, and this makes a pretty fair crop rotation. Stable manure and commercial fertilizers should be used judiciously.

Annuals for Cut Flowers.

Will you please give us the names of annual flowering plants that are suitable for cut flowers, also Summer flowering bulbs for cutting and when is the best time to plant? B. F. W., N.Y.

Answer:—*Arctotis grandis*, white, underside of petals lavender; China Asters, in variety; *Calliopsis*, many varieties; *Centaurea imperialis*, rose, lavender, purple, and white varieties; *Cosmos*, white red and pink; *Delphinium consolida* and *Ajaxis* (annual Larkspur), various colors; *Gypsophila elegans*, white; *Scabiosa*, various colors; *Nigella damascena*, blue and white flowers; Sweet Peas, and *Zinnia*, many colors. The principal Summer flowering bulbs are the Gladioli. These should be planted at the beginning of

May and at intervals of two or three weeks to the end of June. This will give a succession of bloom from July to September or October. *Montbretias* should be planted in early Spring and may be left in the ground over the following Winter if well protected by a covering of strawy manure. *Tuberoses* may be planted in June in a warm, sunny spot. *Lilium candidum* and *L. longiflorum* should be planted in the Fall, and will bloom in June. *Lilium auratum* and *L. speciosum* and varieties may be planted in the Spring. They will bloom in August. F. —*Florists' Exchange*.

Wood Ashes for Gladioli and Garden Fertilizing.

TO THE EDITOR:—

Let us have your opinion as to the proper method of applying wood ashes for garden purposes and especially for Gladioli. Should they be mixed with the soil in which the bulb is planted and should the ashes be under the bulb or over the bulb? G. M. H.

Answer:—Wood ashes may be applied in almost any way convenient, but the more thoroughly they are mixed with the soil the better. Our method is to simply scatter the ashes during fall, winter or early spring from a pail, but the use of a small shovel might be more convenient. They should be thoroughly scattered and not left in piles, even small ones, and perhaps the use of a rake after scattering might spread them more evenly over the surface. It is best that ashes should be applied after plowing as the action of the harrow and cultivator will thoroughly mix them with the top soil, which, of course, is necessary for most thorough results. Ashes should not be applied directly in the trenches with the corms, nor close to the row, but preferably as above suggested, to the ground and thoroughly mixed with the top soil before planting. If applied at the rate of about 10 lbs. of ashes to 100 square feet regularly each year, good results may be expected. Caution and judicious handling must be the rule with wood ashes or any other sort of mineral or chemical fertilizers.

Dividing Gladiolus Corms to Promote Rapid Increase.

TO THE EDITOR:—

Many of we amateurs who have only a few bulbs of the choicer varieties, would appreciate an article on the subject of dividing corms to secure more rapid increase. We want to know how to cut up the corms; whether about as potatoes are cut or otherwise. This method of increasing has been mentioned in past issues of THE MODERN GLADIOLUS GROWER but no details given.

W. B.

Answer:—The only detailed instructions needed, it would seem, is that corms should be cut or divided so that there will be an "eye" on each division. We suppose that a knife may be used for doing the cutting and that no particular plan is necessary, the corm simply being divided from top to bottom corresponding to the number of "eyes" on the corm. It will be necessary to take off the husk of the corm so that the eyes may be seen.

If anyone has suggestions on this subject we will be glad to print them for the further information of our correspondent. If valuable varieties can be materially increased by dividing in this way, the best way of doing it should be generally known.

Cutting Off Peony Foliage.

Would you tell me if the foliage of Peonies should be cut off after they have finished blooming to strengthen the roots, and if so how soon after blooming period, or should foliage be allowed to die off naturally? E. A. S., Ill.

Answer:—The inquirer is advised that he certainly should not cut off the Peony foliage after the plants have finished blooming. It should be allowed to remain on the plants during the entire summer and autumn, during which period the plants should be kept free from weeds, the soil about them cultivated, and in case of a severe drought the plants will be benefited by occasional application of water in sufficient quantities to penetrate to the bottom of the roots. In late fall or early winter after the ground begins to freeze, the tops should be cut off within about four inches of the ground and thrown above the plants to serve as a partial mulch during the winter.—*Florists' Exchange.*

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Growers having surplus stock for sale will find this department effective in disposing of it. Five lines (about forty words) \$1.00 per insertion. Additional lines 15c. each.

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Sweet Alyssum and zinnias, dz. 30c.
Cosmos,dbl. Blue Cornflower, Pansies;
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JOHN ZEESTRATEN

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and other kinds on my list sent prepaid by parcels post to any zone. One of each of above list, prepaid, 75c. One dozen of each, \$5.00, by express collect.

Descriptive list on application, also wholesale list for growers and dealers.

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Small bulbs in growing condition. If the price on large bulbs is an objection buy 50 or 100 small ones and grow them to blooming size.

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If interested in these write for prices. Expect to have 50,000 for July shipment.

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ALL KINDS MIXED	- per oz.	25c	ZVOLANEK, Original Pkt.	- -	25c
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The five packets for \$1.00.

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A splendid assortment of colors 40c. per doz., \$3.00 per 100.

A short and interesting history of the Gladiolus with full cultural directions, will accompany each order.

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Beautiful Carmine with white throat.

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The best and most distinct of all the Primulinus Type.

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The best early white.

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Mrs. Francis King

1st size bulbs at \$1.50 per 100

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1st size bulbs at \$1.50 per 100

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1st size bulbs at \$1.50 per 100

The bulbs are strictly first class in every respect.

If you are interested in ornamental shrubbery, trees or fruits, write us for catalog and prices.

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1½ in. and larger	- -	\$1.00	\$6.00
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GIVE OUR STRAIN A TRIAL.

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Sylvania, Ohio

Announce to the trade that they have retired from the growing business. Their entire stock has been disposed of to the firm of

WESTERBEEK & KLYN
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to which address make inquiries for stock.

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We respectfully request our friends who in the past have favored the Cushman Gladiolus Co. with their orders, to mail us a postal in order that we may include their names on our mailing list.

Mr. Cushman will continue to grow Gladioli for us at Sylvania; the present uncertainty as to the arrival of Holland stock has proven to us that we should grow our stock if possible in the country where we sell the goods.

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Thanks You.**

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\$1 per doz., postpaid.

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See March issue Modern Gladiolus Grower

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THAT WILL BLOOM IN THE MIDDLE
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THAT WILL BLOOM ANYWHERE.

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MAY 1917

Candidum—One of Mrs. Austin's fine productions. Large, white flowers slightly tinted at tips, and reflexed. Tall, erect, free bloomer, sometimes 48 blooms on main spike and side branches.

Big bulbs 15c., \$1.35 doz.

Velvet King—Splendid, wide open, dark scarlet, veined on lower petals with dark color. Stands the hot sun well.

10c., 75c. doz., \$5 hundred

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Titanic (Hoeg)—Don't miss this. Never before offered for sale but has been grown by the hundred by leading amateurs and was shown at Cedar Valley Fair, 1916. Lilac purple with white line through center of flowers. Robust grower, unique. 25c., \$2.50 doz.

Norma Dee Childs—Large flower and spike. Delicate white, softly penciled rose and with large sulphur yellow throat. Exquisite and distinct.

Only 20c., \$1.75 doz.

Schwaben—In some respects the finest yellow *gandavensis*. Large, round petals; massive spike; blotch not conspicuous.

15c., \$1.25 doz., \$8 hundred

Golden West—Similar to Pacha but not same. *Nasturtium* red, with a golden suffusion. Lower petals tipped yellow.

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Europa—Undoubtedly the finest pure white, of good substance and on long spikes, several open at one time.

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Empress of India—Just the opposite, almost black. Satiny buds. Early and very precocious.

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Hyde Park—Fine, new early sort. Cross between May and Shakespeare. Medium growth. Very fine light.

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One Each of the foregoing and two *Primulinus* Hybrids, good flowering bulbs, labeled, postpaid, for **One Dollar**

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Especially for those who "don't know what to get;" want a lot and all good ones:

FIFTY (50) SELECTED

in good variety, with a few samples labeled, including some of the best varieties postpaid for Sixty (60) cents. (Beyond 5th zone, add 5c.) 100 same assortment for \$1.

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Souvenir Collection of Gladiolus Bulbs.

One each of ten choice varieties, fine assortment—America, Princepine, Crackerjack, Golden King, Halley, Taconic, B. Jos. Hulot, Empress of India, Panama, Mrs. Francis King.

Value 65c., by mail, postpaid - - - - 50c.

Two Collections, postpaid, 90c. Three collections, postpaid, \$1.25

Winchester Collection.

This is a well balanced garden collection which always gives perfect satisfaction. Sent express collect on receipt of price—40 America, 26 Mrs. F. King, 16 Independence, 4 Taconic, 4 Willy Wigman, 2 Niagara, 2 Pendleton, 2 B. Hulot, 2 Peace, 2 Geo. Paul.

100 bulbs, (value \$3.00) price - - - - - \$2.50
50 bulbs, " 1.50 " - - - - - 1.25

Send for Catalog. Place your orders EARLY.

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AWARDED FIRST CLASS CERTIFICATE

Price of Golden King has been reduced so as to put it within the reach of all growers. Retail price 10c. each, \$1.00 per doz.

Send for our retail list describing nearly 200 of the better old and new varieties. All of our own growing at fair prices. Wholesale list for dealers and large growers.

We make a specialty of furnishing planting stock of the best new and standard varieties to other Gladiolus Growers, Florists, Market Gardeners, Nurserymen and all others who grow Gladioli commercially.

We recommend planting young $\frac{3}{4}$ to 1 in. blooming size bulbs and sell them very cheaply in lots of 100 and 1000 or more.

A special price will be quoted on a list of your wants if you will state size and number of bulbs of each variety wanted.

G. D. BLACK

GLADIOLUS SPECIALIST

ALBERT LEA - - - - MINN.

THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
Published Monthly by Madison Cooper, Calcium, New York.

Vol. IV.

JUNE, 1917

No. 6



GLADIOLUS—PROSPERITY.
[For description see page 89.]

The Gladiolus Manual.

BY W. W. WILMORE, JR.

CHAPTER XX.

Origin of Varieties.

THE question often arises: "Where did a certain variety originate?" In this we sometimes get a basis for heated arguments. There has been much discussion as to the origin of some of our popular varieties. In one instance there are three persons claiming to have originated the same variety. Of course, we know that only one can have the credit. We can easily see how this could come about. In the early history of Gladiolus growing many seedlings were sent out as seedlings and mixtures by the leading growers. At that time they did not think of separating these various varieties from the seedling beds and giving them names; hence the same variety came into the hands of many at the same period of time. Some knowing that their purchase was a seedling strain began to separate the various varieties of their stock and give them names. This has caused the same variety to be known under two or more names as well as to misplace the origin. Therefore, the uncertainty of origin has given undue credit to some, while others were robbed of the credit due them.

The writer first thought he would attempt to give the names of the varieties now on the market with the name of the originator, but as there are several thousand varieties now in existence and hundreds of new ones being introduced each year, and on account of the aforesaid uncertainty of origin this would be very unwise and it would soon be out of date as the newer introductions are fast displacing the older ones. I will, therefore, mention the originators of our best varieties in connection with some of their introductions. These also are very numerous and would take much time and space to mention all; therefore, the list will not be drawn out longer than necessary:

AMERICAN BREEDERS:

Mrs. A. H. Austin, Wayland, Ohio—*Bluvista*, *Beatrex*, *Easter-Bells*.

Frank Banning, (deceased) Kinsman, Ohio—*Niagara*, *Panama*.

G. D. Black, Albert Lea, Minn.—*Golden King*.

Luther Burbank, Santa Rosa, Calif.—A much improved type of tall growing,

large-flowered varieties, called 20th Century Type. *Rajah*, *Harmonius*, *Gigantic* and *Graceful* are among the best.

Wilbur A. Christy, Warren, Ohio—*Delicatissima*, *Klondyke*, *Ophir*, and *Rose Queen*.

Arthur Cowee, Berlin, N.Y.—Introducing the productions of H. H. Groff.

M. Crawford, Cuyahoga Falls, O.—An author and breeder, prominent in the Gladiolus world for many years. Author of "The Gladiolus" and introducer of *Mary Crawford*, *May*, *Mrs. Watt*, and others.

John Lewis Childs, Flowerfield, L. I., N. Y.—Mr. Childs has become famous from Leichtlini hybrids which he bought from V. H. Hallock & Sons, of Queens, N. Y., and to which he gave the name of *Childsi*. These have become a very important race of Gladioli, containing some of the best varieties of the day. Mr. Childs deserves much credit for the advance of this type and his various introductions. Mr. I. S. Hendrickson, who has long been interested with Mr. Childs, has made a name for himself that will not soon be forgotten. Their collection of Kings are the most notable of the present day: *Fire King*, *Ruby King*, *Salmon King*, *Sulphur King* and *Snow King*.

H. H. Groff, Simcoe, Ont., Canada—Mr. Groff is one of the pioneers of American Gladiolus growers. His seedlings were wonders for many years. His introductions of today are still leaders. Mr. Groff grows Gladioli as a hobby more than a commercial proposition. His introductions in America are sold entirely through Mr. Arthur Cowee, of Berlin, N. Y. Some prominent introductions are *Dawn*, *Peace*, *War*, *Blue Jay*, *Golden West* and many other varieties of similar merit. Mr. Groff has done as much if not more for the advancement of Gladioli than any other American grower.

V. H. Hallock & Sons, Queens, N. Y.—Once the largest bulb growers in the United States, purchased the Leichtlini hybrids, which they afterward sold to John Lewis Childs. They have also introduced *Augusta* and *Octaroon*.

W. E. Kirchoff, Pembroke, N. Y.—*Princepine*, *Miss Ella Kirchoff*, *Miss Mildred Palmer*.

E. E. Stewart, Brooklyn, Mich.—*Golden Queen, Michigan, President Taft and Azure.*

B. Hammond Tracy, Wenhham, Mass.—One of the largest growers in the States of New England, has the credit of introducing *Tracy's Dawn, Mrs. Lancashire, Violet Perfection.* In a recent fire Mr. Tracy lost many valuable seedlings that might have been great assets to the Gladiolus world.

A. E. Kunderd, Goshen, Indiana—Mr. Kunderd has improved the Gladiolus family in more ways than one. He is the originator of the Ruffled type. His *Primulinus* hybrids are wonders. Some of the best plain-petaled varieties are of his origination. He has awakened great interest in breeding and his crosses lead the list. In ruffled varieties he has introduced *White Ivory, Azalea, Pride of Goshen, White King, Orange Glory* and others. In plain varieties, *Mrs. Frank Pendleton, Mrs. W. E. Fryer, Ida Van, Myrtle and Gaiety.*

Dr. Walter Van Fleet, Glenn Dale, Md.—Probably laid the foundation to Burbank's success with the Twentieth Century varieties. He is the originator of *Princeps.* Dr. Van Fleet is an authority on Gladioli and assisted in the writing of "The Gladiolus."

We have many other American Breeders who have introduced from one to a dozen good varieties, some of which are L. Merton Gage, Natick, Mass.; Munsell & Harvey, Ashtabula, Ohio; Jacob Thomann & Sons, Rochester, N. Y.; W. H. Koerner, Milwaukee, Wis., and many others of recent dates.

HOLLAND BREEDERS.

Alkemade & Co., Noordwijk, Holland—*Lily Lehmann, Glory of Holland, Bordeaux and Queen of Pinks.*

P. Hopman & Sons, Hillegom, Holland—*Pink Perfection, Willy Wigman, Annie Wigman.*

K. Velthuys, Hillegom, Holland—*Master Wietse, Mrs. Velthuys, Pride of Hillegom and Loveliness.*

Wigman & Sons, Zutphen, Holland—*Zutphen, Middleburg and Mannheim,* also *Gelria Hybrids* and in all probabilities both *Annie* and *Willie Wigman* but not the introducer.

Firma P. Vos, Mz., Sassenheim, Holland—*Clear Eye and Pink Progression.*

Other Holland introducers are C. Keur & Sons, Hillegom; M. Van Waveren, Hillegom; Warnaar & Company, Sassenheim; C. J. Speelman & Sons, Sassenheim; Jonkheer & Sons, Hillegom, and J. J. Grullemans & Sons, Lisse. The above mentioned are among the foremost and

have been instrumental in introducing most of Holland's productions.

ENGLISH INTRODUCERS.

Kelway & Son, Langport, Somerset—They are introducers of many *Nanus* varieties as well as the large-flowering types. Their *Golden Measure* has created more notice than any other of their introductions.

Mauger & Sons and Wheadon & Sons of Guernsey are also English breeders.

GERMAN INTRODUCERS.

Wilhelm Pfitzer of Stuttgart, Germany, has done more for his country than any other German grower. His list of introductions sent me under date of June 5th, 1915, numbered over 300 varieties. This is not his entire list but select varieties for which he desires credit. His seedlings are numbered before being named and I find that *Frau Otto Beyrodt*, introduced in 1913, is numbered 1022. Some of the best are *Schwaben, Europa, Meteor, Elizabeth Kurtz, Dora Kraiss, Negerfurst and Chameleon.*

A. F. Fitscher, Burgfelder, Hamburg, Germany—*Badenia and Liebesfeuer.*

Max Leichtlin (deceased) Baden Baden—*Leichtlin Hybrids,* now Childsi varieties. Haage & Schmidt, Erfurt, Germany—*White Lady.*

FRENCH BREEDERS.

France has made great advances in this work of which Victor Lemoine was the greatest of all French breeders. We have followed him in previous chapters so will not go into detail again. Some of his best are *Baron J. Hulot, Geo. Paul, Mephistopheles and Jane Dieulafoy.*

Vilmorin is to be complimented with *Mons. A. Brougmart, Desdemona* and *Mad. de Vilmorin* among the best.

Brunelet became popular with his introductions of *Le Triomphe, Mad. Monneret, Sans Parcil and Parure.*

Mons. Souchet, whom we have mentioned before as an early breeder gave us the varieties *Shakespeare and Florence.*

A. Grauverau, of Neauphle le Chateau S. et O should also be complimented on his long list of originations. Like Pfitzer he has created a number that will be worthy of cultivation for years. Some are *Belle Mauve, Mme. Jean Larigardie, Eblouissant, Blanchet, Cendrea and Fleur de Lis.*

There are many others that perhaps should be mentioned in the above list, but on account of the numerous growers it is possible to mention only those that

[Concluded on page 98.]

An Object Lesson in Beautifying Railroad Grounds.

WE are indebted to Mr. F. S. Dietrich, Northern Pacific Station Agent at Clear Lake, Wash., for the accom- speak for themselves and indicate that to improve upon the work accomplished by Mr. Dietrich would be a very difficult

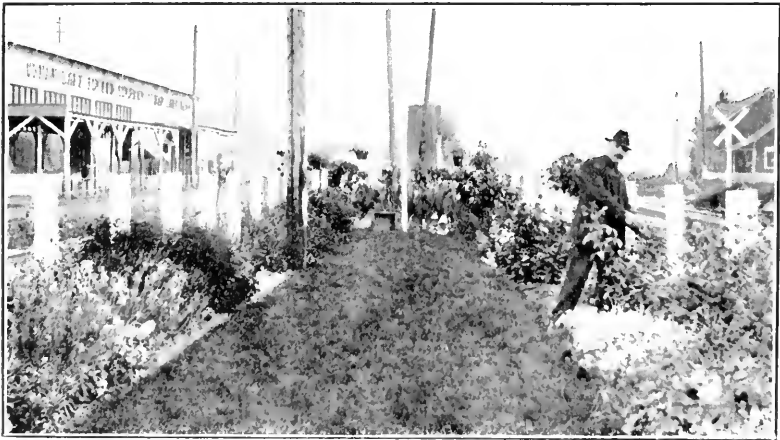


One view of Mr. Dietrich's right-of-way flower garden. Gladioli occupy the center of the stage.

panying photographs. What Mr. Dietrich has been able to accomplish in his little town, other railroad agents and others in similar positions of a public nature would be able to duplicate. We were about to say improve upon, but the photographs

thing. It will be noted that Gladioli have the center of the stage and although many other varieties of flowers are planted, the Gladiolus is doubtless the favorite.

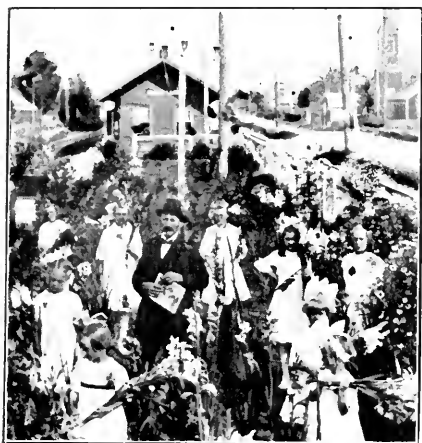
The object to be kept in view is to beautify the grounds adjacent to stations



The other end of Mr. Dietrich's flower garden on railroad right-of-way.

and other public places and in this way get the public interested in flowers. Incidentally this induces orders to the grower and gives business to the express company.

In nearly all small towns there is a piece of ground on the railroad right-of-way adjoining the station which the railroad company will be glad to lease at a nominal rental to any responsible person or civic society for the purpose indicated. It gets people interested in the railroad



The children are interested in Mr. Dietrich's flower garden. Gladioli seem to be their favorite.

station and as this is a center of attraction for the population, they all take pride in having a good flower garden of their own. Furthermore, it gives a good impression to the traveling public as well as satisfaction to the home people.

Mr. Dietrich reports that he puts out a great variety of plants for the purpose of trying them under his climatic conditions and does not hesitate to furnish free of charge plants and seeds to induce those unfamiliar with the subject to undertake the work. After the first season they buy their own seeds and bulbs.

Mr. Dietrich last year planted forty varieties of roses at Clear Lake each labeled with a neat stake so that interested persons can select any variety that they especially take a fancy to and know what they are getting when they order.

Surely more interest should be taken along this line and doubtless there are thousands of locations where a man with Mr. Dietrich's activity and enthusiasm for

flowers could make a showing which would be a satisfaction to himself, to the community and to the traveling public.

Gladiolus—Prosperity.

[Subject of illustration on our front cover page.]

One of Groff's hybrid seedlings which has been introduced by Arthur Cowee and looked forward to by him for several years as a fitting companion to the varieties *War* and *Peace*.

The flowers are large, fully as large as those of its companion varieties. The color is a bright rose shading to madder-lake except on the lower segment which has a chamois-yellow base. Anthers are a quite pronounced violet color and the spikes are equally of strong growth as those of the varieties *War* and *Peace*. The blooms will retain their freshness for many days after cutting which is also true of the two companion varieties referred to.

Plant Some Gladioli.

The rose may be the queen of flowers—but the modern Gladiolus is certainly now the king, with its majestic, regal beauty. Wonderful improvements have been made of late years in the Gladiolus and those of you who try the improved kinds this year for the first time have a great treat in store. No flower will give you greater pleasure than this "Glad Flower of the Garden." It is the flower of flowers for the busy house-wife. It will grow for anyone, anywhere except in shade and wet, soggy ground. It revels in full sunshine and is at its best when planted in long rows in the vegetable garden, receiving the same cultivation as potatoes.

It is in a class by itself as a cut flower, matching any color scheme and lasting a week or more in water. There is no finer cut flower for the hospital, church or home. In cutting it is best to cut when first lower flowers open. The rest will open in the house, and as a rule colors are more refined when they open in water.

Remove the flowers as they fade, and cut a little off the stem and change the water each day. When treated in this way a spike will sometimes last ten days. For a continuous bloom, bulbs should be planted at intervals of two weeks from April 1st to June 15th. However, if you only have a small number, plant early as the early planted bulbs always bloom best.—MRS. MARTIN L. HOWARD in *The Fruit Grower*.

MRS. AUSTIN'S TALKS.

GETTING READY TO TRY HYBRIDIZING.

Now, my dear Amateur, the blooming season is near at hand and I hope you will not let it pass without making a beginning, if only a tiny one, in the growing of seedlings from hand hybridized seed. Perhaps you think that preparing the soil, planting and cultivating the bulbs until they bring forth blooms of large size and beautiful coloring is the greatest of Gladiolus joys, but not until you have peeped into the hybridist's field will you be able to comprehend the pleasure that may be yours in intensive study through the crossing, or hybridizing, of this flower. The early blooms will soon begin opening and it is well to have everything in readiness. Not long ago a lady went into a store and inquired for a jack-knife, and the dapper young clerk informed her that they did not carry such a knife and in fact he had never heard of one, but that they had pocket-knives of various sizes. Webster defines Jack-knife as "A large strong clasp-knife for the pocket," and Pocket-knife as "A knife with one or more blades which fold into the handle," so as to be carried in the pocket. Now, a knife is of great importance in Gladiolus work, but it must be the right kind of a knife, a sort of a cross between a jack-knife and a pocket-knife, for it must be strong, not necessarily large, and have blades which fold into the handle so it can be carried in the pocket. It should have a plain smooth handle of a size that will fit the hand that is to use it, for in using a knife several hours continuously if the handle does not fit it will irritate the hand. It should have two blades, the large one for cutting spikes and general use, and the smaller one to apply pollen in hybridizing, perhaps to clip off the stamens, and many other uses for which a narrow blade is most convenient. Some prefer to use small scissors, sometimes called points, to emasculate a flower, and these may be added to the list of necessities. Stick the points into a small cork so they may be carried in the pocket.

Believing that a small number of crosses well protected will produce, on the average, as many high class varieties as several times as many which are left unprotected, we would advise covering the hybridized blooms with paper bags such as grocers use. Get a supply of plain shipping tags for labeling. These should be of good quality manilla to stand the

weather and large enough to write the date, month and year, and the name or number of the varieties used in making the cross; $1\frac{1}{2}$ x 3 inch is large enough. String them with ordinary wrapping twine cut in 12 inch lengths. As this is also a good length to use in tying the bags when covering the flowers it is well to have a braid of it handy.

Variety test cards such as are used by the Department of Floriculture of Cornell University are very useful, and a field book is indispensable. With it always at hand one can quickly jot down brief descriptions and make note of whatever variation or traits you wish to give further study. For the time has now come that unless the new seedling *does* possess some superior characteristic and is sufficiently distinctive to attract the attention of the casual observer, it should not be named or catalogued, but if it is a good all around variety that will compare favorably with the standards, and is a pleasing color it can be used in the mixture. Right here let me urge the carrying of a pocket rule, for in the first ecstasy of delight you might rashly estimate the size of the bloom to be larger than it really is, and actual measurement should be made. Likewise with the length of the spike, bring out your yardstick and prove its height to your doubtful friend for with your Gladiolus growing you are building a reputation on the foundation of which your future business is to stand.

If the bulbs were planted deep and later cultivated high, it is seldom necessary to stake them, but for the unusually tall ones that might be blown over in a severe storm, better have a few stakes. Don't forget a good pencil of fairly soft lead that will mark easily on the manilla tags. One thing more you *must have* and which is the greatest human power in the achievement of success: *I will.*

MRS. A. H. AUSTIN.

Planting Gladioli in Succession.

The editor's Gladiolus corms have kept extremely dormant this spring and the weather has averaged cool and by judicious opening of storage room windows, the temperature has not been much above 50° at any time. Possibly this may not be an advantage, and especially with the cold weather, succession planting is not likely to avail much this year. Early planted corms have made very slow growth and a succession of plantings to get a long period of bloom should have been at least two weeks apart and in four separate plantings.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
PUBLISHED MONTHLY ON THE FIRST OF THE MONTH BY
MADISON COOPER, CALCIUM, N.Y.

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OUR MOTTO:
Special favors to none, and a square deal to all.

Canadian and Foreign
Subscription Price
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Growers are invited to contribute articles or notes over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.

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Vol. IV.

June, 1917

No. 6

*Gla-di'-o-lus is the singular of Gla-di'-o-li.
Correctly pronounced with accent on the syllable "di."*

Refrigeration for Cut Flowers.

The Editor has been requested to give more in detail his experience with refrigeration in connection with the storage of cut flowers for exhibition purposes as recounted on page 140 of the September, 1916, issue of THE MODERN GLADIOLUS GROWER. As there is nothing secret about his methods and as the Editor is always anxious to lend a hand where the giving out of information will be helpful, he is pleased to comply with the request.

The showing of six spikes of bloom as prize winners which were grown from the only six bulbs available for the purpose, is a record which perhaps may not be duplicated again soon, if ever, and although refrigeration played an important part in the accomplishing of this result, the refrigerating equipment necessary was comparatively simple. As we recollect it, the three first spikes cut were placed in cold storage about a week to ten days earlier than the last three spikes cut. All six of the spikes were under refrigeration for at least two or three days before shipping to Boston.

Our refrigerating facilities consist of two different coolers, one of these is in connection with an ice storage house and

where the temperature holds down around 38°F. The first three spikes were placed in this cooler. The second cooler is simply a basement room with concrete and tile walls and in which near the ceiling is a galvanized pan with rack on which cakes of ice are placed and in which the temperature is held at from 57° to 60°F. The last three spikes of bloom were placed in this room for several days before shipping. The three spikes placed in the lower temperature cooler were removed to the higher temperature cooler the day before shipment was made, so that they had an opportunity to take the higher temperature before being packed for shipment. The six blooms in question were in transit about 24 hours and they were not judged until the second day after shipment. It will be seen, therefore, the somewhat popular idea that perishable goods carried under refrigeration and then exposed to higher temperature will deteriorate or "go down" quickly, did not apply in this case.

Refrigeration must, of course, be handled judiciously in connection with flowers as some varieties and some flowers are much more tender to low temperatures than others. Generally speaking, flowers should not be placed in a tem-

perature below 45 to 50°F. Refrigerating facilities in extremely warm weather are almost a necessity in connection with the handling of cut flowers as extreme heat is very destructive to bloom.

MADISON COOPER.

Advertising Should be Consistent.

It is a little discouraging to the publisher in these days of high printing costs to have advertisers write him to discontinue their advertising because they are sold out. It is flattering to know that THE MODERN GLADIOLUS GROWER is producing results for advertisers, but not very encouraging from a business standpoint to have the advertising stopped. Anyway, advertisers who expect to stay in the business should not drop out completely during the off season when no sales are being made or because they have no stock for sale at the moment. THE MODERN GLADIOLUS GROWER is a reference work and growers who are in the business to stay should be represented in every issue. It is all right to use increased space during the selling season and when special things are offered for sale, but reasonable space should be used throughout the year in proportion to the importance of the business.

We have really had some very remarkable letters as to the advertising results secured from THE MODERN GLADIOLUS GROWER. One classified advertisement drew 75 inquiries. Another advertiser writes that he has made over 1900 sales from his advertising in THE MODERN GLADIOLUS GROWER in two years' time.

MADISON COOPER.

Most people who have anything to say about digging Gladioli, direct that the stalk or foliage should be cut off from one-half to one and one-half inches from the corm. If anyone has a liking for investigation, let him try cutting off the stalk close to the corm on a few, and one and one-half inches from the corm on others, and at planting time next year see if he can discover any difference in

the condition of the corm itself. He certainly will discover that the old foliage protruding from the corm is a nuisance, takes up space, and makes the corms difficult to handle and pack; and also inconvenient to properly set at planting time.

Cannas and Salvias.

One of the showiest beds I have seen was a clump of cannas bordered by a row of salvias. The taller sorts of cannas were used, especially for the center of the bed. *Pennsylvania* is a good red sort that has green foliage and the color of the flower harmonizes well with the salvia. *King Humbert* is a dark-leaved canna that is a good companion to the *Pennsylvania*. The light foliage of the salvia and the scarlet flowers look well against the dark foliage of this variety. Both of these cannas have large orchid type flowers.

Canna bulbs can be purchased dry, or the growing plants can be had instead. The plants give quicker and more uniform results. These are bulbs potted up and started early. If you have the bulbs you can pot a few and start them in a warm room and have them ready to plant out and get large clumps long before the dry bulbs planted in the beds would make any showing.

Salvia plants are to be had of any florist, and the price is not high. Seeds can be planted in a box early and the seedlings really make nicer plants than the cuttings, but they will not bloom nearly so soon. The plants from cuttings of the later dwarf varieties will begin blooming when six inches high and keep it up. They grow to two feet or over.

A bed to look well with these two planted together should be pretty large. Both grow rather tall, and the salvias spread out about as much as they grow upward. I like to allow them eighteen inches to two feet outside the canna row to give them a chance to grow freely and not look too crowded.—L. H. COBB in *The National Stockman and Farmer*.

Does any one remember of passing Memorial Day without lilacs or peonies in bloom? We do not, of course, refer to locations south of New York, although possibly the cold and unseasonable conditions may prevail there as well as with us; but here in Northern New York not only were there no lilacs or peonies in bloom for Decoration Day, but the buds were so immature that it looked as though they would be at least a week later.

WAYSIDE RAMBLINGS.

ROOT GROWTH ON NEW CORMS OF GLADIOLI
— DISBUDDING GLADIOLI.

In his communication about the time of digging Gladioli, it seems to me that "G. C." has the cart before the horse with regard to the root growth of new corms. My understanding of the matter is that the new corms *always* make roots as soon as they are formed and complete their growth by means of them. These roots are less conspicuous instead of more, when the corms are dug late.

I must disagree even with so high an authority as J. Kelway. My observation seems to show that the new corm is well started about the time of flowering and the cormels just started. After that time, if moisture is sufficient, the growth of corms and cormels goes on and if they are dug soon neither the corms nor cormels attain their full size. Doubtless they will grow nevertheless. I never wait for foliage to ripen but if it does I think it best not to leave the corms in the ground long, especially if it is wet. Apropos of not leaving flowers to go to seed: I wonder how many have ever made a careful test by leaving one row to go to seed and removing flower buds from another adjoining row of the same variety, planted at the same time. The seeds of Gladioli are not very rich, like grain seeds, and some growers think they take very little from the plant. It might be more important when there is scarcely enough moisture to mature the plant. The flower stalk itself has considerable substance and I think it may be this, rather than the seed, that calls for nourishment which may be diverted to the corm if removed early. GEO. S. WOODRUFF.

SOME BULB.

Among the stock of Gladioli we harvested last autumn was a bulb of *Easter Bells* which measured $9\frac{1}{2}$ " in circumference. It was of good form—conical in shape—and was firm and bright.

MONTAGUE CHAMBERLAIN.

HARDY GLADIOLI.

For three winters I have had a cluster of bulbs living and blossoming like a narcissus in my garden with no care in covering them. In September I dug them up and found six bulbs. Two I put back in their burrow to try another northern New York winter. C. L. WILLIAMS.

WHO ARE AMATEURS?

I have read with deep interest the articles in THE MODERN GLADIOLUS GROWER on "Who are the Amateurs." This important question is and has been with us in this section of the country for some time and is still not settled. I would like to offer my solution:

1st class—Professionals. 2nd class—Amateurs. 3rd class—New Amateurs.

The object of all competitive exhibits is for the purpose of putting on exhibition perfect or as nearly perfect flowers as can be grown. The perfect flower and how to grow it, is the high standard we are seeking to attain. Not who, or where, but how. Defining the classes mentioned above, I would classify them as follows: 1st. Professionals. Those who grow flowers under glass, thereby largely controlling weather conditions; one who grows large quantities of flowers for commercial purposes, supplying florists, etc.

2nd. Amateurs. Those who grow flowers not protected by glass, thereby subject to the conditions of the weather; not for commercial purposes and not in large quantities.

3rd. New Amateurs. Those who grow flowers, but have never entered into competition, or those who have exhibited not to exceed three years.

I fully realize that the word "Amateur" has been given a very liberal construction. It would seem almost impossible to go into minute details when the amateur forms the strong feature in every open exhibit. GUY C. HAWKINS.

LICE ON GLADIOLUS CORMS.

Last year I lost considerable of my stock through an insect which I presume belongs to the Aphis tribe. This year I find I am confronted with the same pest. A great many of my bulbs are literally covered with countless grey lice or Aphis which congregate around the top of the bulb, evidently feeding on the shoot. Last year I soaked my bulbs for a couple of days in water and then used a scrub-brush to clean them, but when planted they made a sickly growth, (those that did grow) and some never came up at all. Have you heard of such a trouble and if so will be glad to hear of a remedy?

J. P. W.

Note by the Editor—

This question has come up once before but satisfactory information as to how to treat the pest in question, has never been supplied. Can anyone help us with this problem?

WORKING IN THE SUN.

I will quote a paragraph from *The Country Gentleman* which is especially applicable for those who work among Gladioli as often this work comes in the very hottest part of the summer:

"Most of us are such creatures of habit that we are likely, in digging, cultivating and transplanting and thinning, to begin always at the same end of the garden rows and to work always in the same direction. Try varying the method to suit the season and the time of day. If the day is hot and you want to avoid the effect of the sun as much as possible turn your 'face to it.' If the day is cool and the sun's warmth adds to your comfort, turn your 'back to it.' In garden work you are bound to stoop more or less and with your back to the sun you present the broadest expanse of your person to its rays. On the contrary, when you face the sun, so stooping, the rays strike mostly on your head, which, of course, should be protected by an ample hat with, perhaps, a cabbage leaf (a wet sponge is better) in it."

B. F. STALNAKER.

FORDHOOK HYBRIDS.

In February *House and Garden*, I find: "The most remarkable development within recent years in Gladioli is the creation of the new type, a race known as Fordhook Hybrids." Yet I fail to find any mention of them in my 21 numbers of THE MODERN GLADIOLUS GROWER, or find them offered in the 20 different Gladiolus catalogs I have. Why this "conspiracy of silence" about this wonderful new race?

C. M. S.

We are not prepared to pass an opinion on the above, not having seen the flowers. Improvements on the old types are often described in extravagant terms, and by comparison with the old sorts they are truly wonderful. When compared with the contemporary work of other hybridizers the descriptions are not generally warranted.—(Editor.)

LUCRETIA IN 53 DAYS.

I believe I can report the earliest flowering record for outside planting of Gladioli. If any grower can beat it I hope to hear about it. May 16th I received from Holland a lot of Gladiolus corms which were planted on May 17th. July 9th I cut the first spike of *Lucretia*, just 53 days from planting. This is ten days ahead of any record I have seen in THE MODERN GLADIOLUS GROWER.

H. C. ECKERT.

DATES OF GLADIOLUS BLOOMING.

Mr. Chamberlain in his letter in your February number, received by me on the 7th of March, places great emphasis on the number of days from planting to blooming. I did not put much count on this point in the past, but in any future notes I may send you on this subject I will endeavor to comply with his suggestion.

In reading Mr. D'ombrian's paper I think he was speaking generally, when he stated that

"there are certain kinds which are sure to come early whenever you plant, and other late blooming kinds refuse to bloom early, plant when you will."

In the same way as we speak of early and late peas, potatoes, etc. Most catalogues distinguish some of the varieties of Gladioli as early, others as late; others divide them into three or more classes.

I suppose root growth precedes top growth; if so, the earlier planted bulb should not only produce the stronger flowers, but also the stronger stock for the following season. Therefore, for the purpose of a trial the earlier the bulbs can be planted the better. The important point is that the whole stock should be planted on the same day and receive the same treatment throughout, if the trial is to be of any real value.

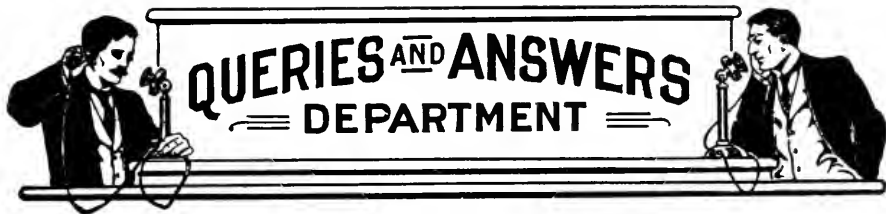
There is in Vol. 126 of the *R. H. S. Journal* p. 604, a "Report on Gladiolus grown at Chiswich, 1901," but beyond the fact that "all the corms were planted on May 6th there is nothing to show on what dates they were in flower. Further no awards were made, notwithstanding that over fifty varieties were grown. G. C.

GLADIOLUS LACORDAIRE.

Lovers of Gladioli, who like varieties with deep green foliage which stays green, will find it in the variety, *Lacordaire*. This variety has the deepest green foliage of any I have ever tried. The color of the flower is beautiful, described as a brilliant, flaming vermillion, self-colored. But this variety has its weakness, the flowers are of poor substance and only a few on a spike. H. W. GROSCHNER.

LIGHT BLUE GLADIOLUS.

Referring to the inquiry of one of your subscribers on page 9 of the January issue of THE MODERN GLADIOLUS GROWER asking for a light blue Gladiolus: I found last year that Mr. Kunderd's *Blue Iris* was a pretty pale blue. A. P. M.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Does Cutting the Bloom Weaken the Corm—Gladioli on Sod.

TO THE EDITOR:—

I would like to have your opinion regarding the practice of selling cut blooms from stock intended for the sale of bulbs. Do growers generally do this or do they have a separate plot for cut bloom? It occurs to me that the stalk would have to be cut down so low to satisfy florists that it would injure the bulb. I also have an idea that there are so many selling cut blooms that there would not be much profit in that line of business for the small producer anyway—market always glutted during the blooming season, etc.

Do you think that sod ground well harrowed would grow satisfactory bulbs? H. M. G.

Answer:—It is pretty safe to say that most all growers sell cut flowers if they can find a market for them. Really, what difference does it make whether the bloom is cut and sold, or cut and thrown on the ground, or perhaps what is worse, allowed to mature without cutting? For the very highest results, however, the practice of disbudding, simply snapping off the buds as they appear without even allowing them to open, is practiced by some people. We do not believe that cutting the bloom interferes with the value of the corm, providing, of course, that it is young stock and anyway, even if it is old stock, the cutting of bloom would have little influence if any, on the strength and vitality of the corm for next year's bloom. It is more a question of having a reasonable time to mature the new corm before digging. It is assumed, of course, that no grower will cut more than two leaves with a flower spike not even to satisfy the most fastidious florist. Two leaves with the flower spike ought to be enough and no one should cut more than this if he expects corms of value for the next year's bloom.

It is quite true that the market for cut flowers is pretty well filled during certain seasons of the year, but this was not the case during 1916. There was no time during the season when high prices could not be realized for cut bloom last year. This was, we suppose, owing to the droughty conditions prevailing over the greater part of the country. In the selling of cut

blooms it is more a question of locating buyers than anything else. It is well to work up your own trade and not depend on the wholesale flower market. The wholesale flower market has only a certain outlet with a somewhat increased outlet if the price is low. If you work up your own trade you may be developing an entirely new outlet and increase the sale of Gladioli to that extent.

It would hardly seem that sod plowed in the spring could well be made use of for the growing of Gladioli. Possibly fall plowing of sod might prove satisfactory if the sod was well rotted before harrowing in the spring. As a general statement Gladioli should follow some hoed crop of the previous year.

Hen Manure for Gladioli—Planting Bulblets in Cold Frames in June.

TO THE EDITOR:—

We have an abundance of "hen dressing" which I thought might take the place of commercial fertilizer for Gladiolus growing. What would be the result?

Also have a cold frame in which we grow aster plants, which would be out of service in June. Would it be too late to plant bulblets in the cold frame at that time? Would you suggest using wood ashes and sand to lighten the soil and how deep should they be planted? Your practical experience would be appreciated. MRS. G. M. T.

Answer:—We have never used hen manure for Gladioli, but we understand that this material is valuable as a fertilizer and we presume equal to pulverized sheep manure. We advise caution in the use of these nitrogenous fertilizers. They are likely to cause a too luxuriant a growth of foliage.

Cold frames in general are no great advantage for bulblets and certainly not as late as June. Bulblets should be planted as early as the ground can be worked. Would recommend that you utilize the cold frame for blooming size bulbs for late bloom.

Sand mixed with heavy soil would certainly be a good thing and sifted coal ashes may be used for the same purpose. They should be thoroughly incorporated

or mixed with the top eight or ten inches of soil. This is best accomplished by scattering the sand or ashes before harrowing and it is best not to attempt to accomplish the desired result in one season, but rather by two or three applications during consecutive years as it is difficult to get a thorough incorporation in one season.

Wood ashes contain a large amount of lime and do not serve the same general purpose for lightening soil as coal ashes. About ten pounds of wood ashes to ten feet square (100 sq. ft.) is about right and this quantity may be used each year with success.

The best way to use stable manure is to apply it in the fall of the year at the rate of ten to fifteen tons per acre. This quantity can be applied each year without serious detriment to the soil and if a heavy crop of Gladioli is grown, a moderate amount of balanced commercial fertilizer may also be used. If the manure is pretty well rotted when applied, so much the better, but if applied early in the fall and plowed under, it will be pretty well rotted before spring and when the soil is cultivated before planting it will usually work up in good shape.

More Gladiolus Poetry.

Our good friend whose name is attached to the verses which follow has been moved by Mr. Christy's work in the same line and by our editorial comments thereon to offer some suggestions of his own, that pecuniary reward is not the only thing to be had out of a given undertaking. He is right. There are a lot of other things to be had if we know how to get them. We are glad that Mr. Reading appreciates the fact that THE MODERN GLADIOLUS GROWER is not a profit making enterprise and although his verses might indicate that it was, his prose makes it plain that it is not. Nevertheless, THE MODERN GLADIOLUS GROWER is a success. There is no doubt about that and we expect to make it a still greater success.—THE EDITOR.

MY DEAR COOPER:—

Do not take the verses too seriously—either my own or Mr. Christy's—poets, you know, have license to exaggerate, distort, pervert, and even prevaricate, and still continue to remain in good standing as long as they don't steal—plagiarism being the one and only unpardonable sin.

My effusion should be interpreted more as a tribute to Mr. Christy's ability as a

writer than as an intimation of your own financial success from your chosen venture. Both yourself and Christy are in your work primarily for the love of it, and success to such is not measured merely by increases to the bank account, although fickle fortune often favors him who works for the love of it. Here I am reminded of the following clever lines by Kenyon Cox, which appeared some years ago in the *Century Magazine*, and which I memorized because of their worth:

THE GOSPEL OF ART.

Work thou for pleasure. Sing or paint or carve
The thing thou lovest, though the body starve.

Who works for glory misses off the goal;
Who works for money coins his very soul.

Work for the work's sake then, and it may be
These things shall be added unto thee.

Sincerely yours,

H. G. READING.

MORE MONEY IN GLADIOLI.

CHRISTY'S MISTAKE.

Dear Editor: With interest
I've read the mournful, self-confessed
Poetical acknowledgment
By Mr. Wilbur Christy sent,
Telling his failure to obtain
The riches he had hoped to gain
By planting corms and cutting spikes—
An occupation Christy likes—
And if an expert such as he
Fails, what's in store for dubs like me?
Now, Christy, as I understand,
Placed all dependence in his land
To bring him wealth and honors high,
From growing choice Gladioli.

Here Christy made a sad mistake—
The same so many others make
Who labor, riches to obtain.
Employing brawn instead of brain.
If money was his chiefest aim,
He should instead have done the same
As you did, Brother Cooper, when
You chose the editorial pen
And gave a magazine to us
Exploiting the Gladiolus.
Had Christy wielded pen instead
Of hoe to earn his daily bread,
He'd ne'er write verses to deny
"There's money in Gladioli!"
—H. G. Reading.

A Backward Spring.

There is no doubt about the backward condition of crops on June 1st this year. While the temperature has averaged low, yet at least in the eastern sections of the country killing frosts have not done much damage. Frequent though not heavy rains have kept the grass growing and except on low land cultivation and planting has proceeded although somewhat behind the average.

If we have escaped late spring frosts and are favored with frequent rains we may still look for a favorable season.

Wheel Hoes.

That the gardener has a wheel hoe of some kind almost goes without saying. That he knows just how to use it doesn't always go that way. I've found some helps from experience and other wheel-hoers' experiences that have saved me a lot of time and made a good many better jobs than I would have had without.

The two six or seven inch blades that are a part of every wheel hoe proper are used very likely a good many more times than all of the other attachments together. They can be used in most kinds of work. But with us there was an objection to them because they left the soil unbroken and so many weeds lived even after they were cut off simply because the thin slice of soil left by the hoe was just enough to keep the weeds going till it rained. So we took a good piece of board about six inches by two by one and a half, made a bolt hole through the center to fasten this to the wheel hoe frame, bored six one-eighth inch holes through the piece at right angles to the bolt hole, ran wires of about No. 8 size through them and sharpened the end of the wires so that they made a sort of rake which followed a few inches behind the blades. The wires were of different lengths so that there was no trouble about clogging with weeds. This leaves the surface as smooth as could be desired and breaks up the slice of soil so that the weeds are killed and the soil left with the dust mulch.

I find that if a wheel hoe is run when the ground is slightly damp there will be a certain amount of soil sticking to the tires. This will make small bumps that will throw the hoe out of balance just enough to spoil the work as long as the lumps are on the tires. I keep a dull knife handy for scraping this dirt off. It pays to do this several times or until the dirt stops gathering on the wheels.

I have found a deep cigar box or any sort of a box mighty handy when fastened to one handle of the hoe. There is apt to be some trash or straw on the surface of the most carefully prepared seed bed. It can be quickly dumped in this box and carried to the end of the field and by simply turning over the hoe the contents dumped where they will not harm anything.

As a part of every blade of the wheel hoe there is an upright part that is intended to allow close cutting to the row and to prevent some dirt from tumbling onto the small vegetables. If this is left with a sharp edge it will do a lot of harm in a good many kinds of work after the

vegetables get closer to maturity. Blunt this edge with a file or grinding machine and save considerable of the crop you are tending.

After using a wheel hoe for a few years it becomes worn and loose in the spindles. This with the blades is the only place that a wheel hoe wears out. I have found a considerable help in using a heavy piece of tin as a washer to take up this wear. A wobbly wheel makes sure, quick and accurate work almost impossible. Steady, firm wheels will also help it a lot.

When you have to have the blades renewed at times it is a pretty good plan to get them an inch or so longer than you expect to use. Usually a six inch blade will leave strips of uncultivated surface between the rows if the drilling wasn't exactly straight. The longer blade will get these places. Besides that it will wear longer because it is wider when first purchased.—R. E. ROGERS in *The Garden Magazine*.

Flowers vs. Food.

The enthusiasm with which the average gardener has heeded the call of the government in the planting of food crops has been noticeable, but it is probable that as the growing season advances those who are accustomed to have flowers will feel their absence and here is where those who grow cut flowers this year may find a profit.

While we are in sympathy with the movement toward raising foods we do not believe that anyone is justified in excluding flowers from their regular growing crops, even though the call for foods is pressing. Those who have never grown cultivated crops will do well to start with vegetables, but those who are accustomed to grow flowers should not abandon them in favor of vegetables exclusively. It is probable that the present food shortage is temporary and we must not forget our love for the beautiful.

Again we suggest that those who have flowers this year are likely to find a ready market for them and certainly those who grow for their own enjoyment and not for market are entitled to a reasonable gratification of their tastes in this direction.

Next year with the war over, flower lovers who have been growing vegetables largely this year, will return to their favorites again. Those who are growing Gladioli this year may be sure that there will be a demand for their product another year.

The Gladiolus Manual.

[Continued from page 87.]

have come before the public by their merits.

There is no doubt but that there are some who have been omitted above who have done more in the Gladiolus world than some mentioned, and in the future may become famous for their originations and breeding, but to date we have given credit to those only who have been brought before our notice and have made a mark.

Growing Gladiolus Corms in the South.

There were a few statements made by Mr. Charles L. Baum, of Knoxville, Tenn., in his address recently before the Tennessee State Florists' Association that we wish to call special attention to. The subject that was discussed by Mr. Baum was "Gladiolus as Summer Cut Flowers, Their Culture in the South," and was published in full in *Southern Florist*, Feb. 10th. The statement we want to call special attention to is as follows:

"Now, as to the cultivation of Gladiolus bulbs here in our Southern country, I do not believe there is a place anywhere that is better adapted to their culture than here. We can begin planting late in February or early in March and have a long season in which to grow the bulb, and from a small bulblet or cormlet grow a flowering bulb in one season, and if these bulbs are just left in the ground, not dug, the next season they will give you 60% of select and 40% of No. 1 blooming bulbs, and a sounder or more healthy bulb you cannot find anywhere. I am speaking from experience, for last April a year ago I planted three bushels of *America* cormlets and left them out over winter, and this last fall they were dug and a finer lot of bulbs were never harvested. They were all blooming bulbs and one and a half acres of cormlets were planted last October in the field. The former one and a half acres we will harvest this coming October, and the other one and a half acres will be dug a year from the coming October. I have seven bushels of hard cormlets to plant this spring which will be planted in the same field, and as last fall was the first time I planted hard bulblets in the fall it will determine which is the best—fall or spring planting."

Mr. Baum also said:

"Our advantage over the North is that we can produce a better bulb in less time

and I know we can grow a better bulb here than in Holland and I believe by growing them on a large scale we can grow them just as cheaply as on the other side, as we have better weather conditions and do not have to dig the bulbs until they have reached their full blooming size."

There are very many important plants and flowers that we can be very successful with in the South if our florists would only have the confidence in themselves, and points brought out by Mr. Baum concerning the Gladiolus are similar to the facts with reference to many other plants and flowers. We hope that the day will speedily come when our florists will wake up to the many splendid opportunities that lie at their feet for the growing of many articles on a large scale, and cause the eyes of the world to be turned upon us for the things we do.—*Southern Florist*.

We would be glad to hear from some of our Northern growers who have had experience in the South. (*Editor*.)

Asters.

The finest asters may be raised on a light sandy soil providing it is properly handled. Such a soil should be plowed or spaded deeply and heavily manured in September or October. Then a thorough stirring of the soil in the spring to incorporate the manure will place the ground in best condition to grow fine bloom.

When the work is not attended to in the fall it is best to prepare the ground as early as possible in the spring using a large quantity of well rotted barnyard manure with a good sprinkling of bone dust and wood ashes thoroughly mixed with the soil.

It is usually more profitable to properly fertilize one piece of soil than a much larger piece poorly.

Plants grown indoors should be hardened to the open air by placing in a cold frame where on pleasant days the sash may be removed; or the asters may be placed under a covered porch and covered during the coldest nights. This hardening before transplanting is important for best results.

Gladiolus growers, no matter on how small a scale they may be growing, should try to find a market for their surplus cut bloom. The florists can use Gladiolus bloom to advantage in many cases and hotels, public institutions, etc., often become good customers. See what you can do.

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Published Monthly by Madison Cooper, Calcium, New York.

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JULY, 1917

No. 7



GLADIOLUS—BLANCHE

Introduced by John Lewis Childs. Flowers large of pure white and with but faint marks.

Gladiolus Growing for the Amateur.

K. ATKINSON in Annual of the National Gladiolus Society for 1914-1915.

THE culture of Gladioli is in reality extremely simple, it is a flower that will grow with ease nearly anywhere, in nearly any soil, provided one or two essentials are secured; it lends itself to any decorative scheme of gardening and is wonderfully effective as a cut flower. It is, therefore, pre-eminently a flower for the Amateur Gardener, and the sole reason that its culture has been so neglected until quite lately is that there has existed a quite erroneous impression that it is difficult to grow, and secondly, that there has been no simple advice obtainable as to the best method of cultivation. Another cause that has prevented the Gladiolus from coming to her place as Queen among the hardy border flowers is the high price hitherto asked by bulb salesmen for the bulbs. That is all changed now, some of the finest varieties obtainable can now be bought for 1d. and 2d. per bulb, and the time has come when every garden should have its border of glorious Gladioli.

The cultivation of Gladioli is far more simple and less troublesome than that of the Rose and Sweet Pea, their time of blooming being of far greater length than either of these well established favorites.

Commencing at the end of June, the Gladiolus can be had in bloom in unbroken succession till November, and in water it will outlast any other flower either of the garden or hot house.

If the amateur, who is forming a Gladiolus collection, desires to show his blooms, he must of necessity take rather more pains in their cultivation, it may be as well, therefore, to divide instructions into two heads: (1) Treatment for show; (2) Treatment for the flower border and for cut bloom.

1. Treatment for show: For this purpose it is as well to prepare a bed in late November and December. The Gladiolus is first of all a sun lover, no spot is too hot for him, he loves the full glare of the sun and will do best of all under a south wall, he should have plenty of air, too, but must be sheltered from the toughest winds; on no account, however, plant near trees or shrubs where the blooms will be overshadowed and the ground stained by roots of stronger plants.

The show bloom bed should be well dug in the late autumn, a fairly heavy dressing of farm yard manure should be spread on

the land and dug in with a fork or spade if the ground is at all poor, if rich, this may be omitted; a good loam is the favorite soil, but Gladioli will do well in sandy soils and even in stiff clay—in the latter case it is as well to apply a liberal dressing of ashes in November and dig them in to break up the ground a little. If sandy, the bed must certainly be well manured, but on no account in any soil must farm yard or horse manure be used just before planting, at least two months and preferably three, must elapse between manuring and planting time. Having manured and dug the bed, let it lie till three weeks before planting, then dig it once again to let the air well into the soil.

Planting can commence in early March in the South of England, in April in the North. The bulb is intolerant of frost, but will stand eight degrees, while it is in the ground without sustaining any harm; the danger, however, in early planting is in having the young green shoot nipped off by five or six degrees of frost when it is a few inches high. This, however, can be guarded against by a knowledge of the local conditions, also by a little temporary shelter of hurdles or canvas.

It is best to plant the show stuff in rows, 18 inches between each row, nine inches between each bulb, and four inches deep, this allowing free cultivation. Directly the spikes of green are well up the hoe should be kept going, the soil being kept well stirred round the bulbs and all weeds removed. When the flower spikes begin to grow away from the sheath of leaves, put a bamboo cane about three inches from the bulb and tie the spikes to it, but not so tightly that it cannot expand and grow, nor yet so loosely that the flower when open will swing and bruise itself. It must be remembered that the show bloom is very heavy and requires support. All side heavy shoots coming out of the main stem must be removed in order to get size in the main bloom.

Should the season be very dry, give a copious watering twice a week, a sprinkle is quite useless, and unless plenty of water is available, it is best to leave it alone altogether. A very light dressing of artificial fertilizer may be given when the flower spike first shows; this should be sprinkled on the soil and watered in

or else dissolved in the can and applied with water.

If these simple directions are followed Gladioli can be obtained with flower stems $5\frac{1}{2}$ feet high and with flowers six inches in diameter. This is no exaggeration, the record height for a Gladiolus is seven feet, and the largest bloom recorded was eight inches in diameter. Both were grown on a light loam soil with the treatment here advised.

In the choice of varieties for showing the amateur may easily be led astray, many beautiful spikes of bloom are shown in trade exhibits, the bulb of which, if purchased, will give very unsatisfactory results the succeeding year. This, however, is becoming far less common than formally; there are now hundreds of sterling varieties with strong constitutions from which a selection may be made. The following are all show varieties, and are all strong standard sorts which range in price from 12/6 per bulb to 2d.:

Loveliness, cream; *Brooklands*, rose; *Halley* and *Prince of Wales*, salmon; *Dawn*, flame pink; *Armagnac*, scarlet and white; *Golden West* and *Meteor*, glowing orange; *Golden King*, *Glory of Noordwijk*, *Schwaben* and *Niagara*, yellow; *Liebesfeuer* and *Fire King*, scarlet; *Panama*, *Cassilda*, *Eugene Sandow*, pink; *Mary Fennell*, *Bleriot*, mauve; *General Marina*, purple; *Anna Goldschmidt* and *Zeppelin*, white; *Prince of India*, chocolate and flame; *Orby*, *Phlegeton*, *Pride of America* and *Gallieni*, range from deep crimson to vermilion red.

From these, too, the amateur hybridizer may make a fine selection for his experiments.

2. Treatment for the flower border: If Gladioli are wanted for color effect in a massed border, they should be planted in clumps of about 15 to 20 bulbs, the bulbs should be put in four inches apart and plenty of air and light must be allowed. It is useless to hope for a really fine result if the bulbs are planted close to tall rank growing plants such as Dahlias, Michaelmas Daisies and the like. Dig the ground well before planting and if the soil be poor give a few applications of manure water in the flowering season. Gladioli in the border need not be staked unless the position be very much exposed to wind. Planted among Dwarf Roses in formal beds they look very well. Neither plant interferes with the other, and the Gladioli come into bloom just when the first Rose bloom is going over, thus securing for the garden a continuity of color.

A fine color scheme for a formal bed

can be obtained by a mixture of *Brenchleyensis* and *Baron J. Hulot*, but the range of coloring in Gladioli is so wide that any color effect can be secured with very little trouble.

For the Herbaceous border the following are among the best:

Halley, *Wynrod* (or *Czar Peter*), *Baron J. Hulot*, *Michigan*, *Mrs. Francis King*, *America*, *Amie Wigman*, *Master Weisse*, *Faust*, *Empress of India*, *Chicago White*, *Aprikose*, *Ida Van*, *Marie Therese*, *Princeps*, *Admiral Cervera*, *Grande Blanche* and the old *Brenchleyensis*.

For cut flower work where smaller, more slender spikes are required, plant *Purity*, *Sulphur King*, *President Taft*, *Baron Hulot*, *Dick*, *Master Weisse*, *L'Innocence*, *Excelsa*. For the dinner table nothing exceeds the beauty of the orange and yellow tones of the Hybrids of *Primulinus*, these being among the most graceful flowers that have ever been grown.

There are many other varieties both for show and garden work, equal in beauty and general excellence to those mentioned here, but it is manifestly impossible to give a catalogue of all the desirable Gladioli, the eye only becomes confused among a mass of names and a sufficient choice for the start of a collection can be made among those enumerated.

Blue Flags.

O golden days, O woodland ways,
And sunny meadows, teeming
With treasures rare, most royal fare,
For bards' or lovers' dreaming,
O silvery stream, with glint and gleam,
Where dipping boughs are laving,
The current lags where sweet blue flags
By ripples stirred are waving.

Amid the green, their soft blue sheen,
With white and purple penciled,
Like bits of sky, where sunbeams lie,
Through leafy branches stenciled,
O faint perfume, no other bloom
Can match, for fine distilling,
Thy essence rare that dulls all care,
And sets my senses thrilling.

To Southern skies my fancy flies,
Beneath whose soft beguiling,
What songs I sung, when hope was young,
And all the World was smiling,
O memories dear, that linger near
The meadow, brook and wildwood,
And blue flags sweet, that made complete
The sunny days of childhood.

—William E. Hunt.

The Iris is a good companion flower to the Gladiolus. There are few flowers as early as the Iris and the improved varieties now being introduced are quite wonderful. W. E. Fryer's new Irises are worthy of any flower lover's consideration.

The Gladiolus.

EACH year sees an increased activity among lovers of the Gladiolus. More varieties are introduced, more variations of color are noticed, and the improvement of form and habit in the inflorescence is marked. This summer bulb is indeed a flower in a million for the gardens of America. It is one in which every gardener can indulge his fancy. The connoisseur, the seeker for rarities, has all the scope for extravagance that he may wish; while at the same time the sternly practical man, who wishes the most for the smallest outlay, can surely find material to satisfy his desires. Some varieties there are that will flower nine weeks from date of planting, and by making successional plantings at intervals of two weeks, blooms may be had in the garden until frost brings down the curtain.

The Gladiolus will give the best account of itself when planted in clumps among other subjects, as in the herbaceous border or in the shrubbery. That is far better than setting them out in military like rows which only seems to accentuate what natural stiffness they possess. When planting in mixture with other subjects, it is well, however, to observe that they are not planted in close proximity to subjects which are gross feeders or among the roots of shrubs which are liable to make an undue toll upon the fertility of the soil and to the detriment of the Gladiolus. Happy effects may be obtained by planting Gladioli in conjunction with annuals of long season, such as Petunia, Eschscholtzia, Phlox, Sweet Alyssum, or dwarf Nasturtium. A bed of annuals and Gladioli in mixture is satisfactory for a late planted garden. First of all, plant over the area with Gladiolus bulbs 15 inches apart. These bulbs, of course, being set three to six inches deep, according as to whether the soil is heavy or light. Then, sow annuals broadcast according to fancy. The seed of these annuals will be lightly raked into the soil, except in the case of Nasturtiums which must be planted one inch deep. Later the seedling annuals must be thinned out rigorously to perhaps nine inches apart. Additional batches of Gladioli can then be planted in here at fortnightly intervals until mid-July, which will insure a continuous display of bloom from the bed. Grown in this way and allowed to finish their flowering on the plant, the flowering spike must be cut down as the last flowers

fade in order to give room for succession and to maintain a neat appearance. When cutting, leave as many leaves as possible on the plant in order to perfect the new bulb which is the secret of next season's vigor.

The variety of Gladioli is almost infinite, but I may be allowed to name a few as suggesting appropriate combinations with the better known annuals.

Halley—a Gladiolus with flowers of salmony-pink, blooms within two months from date of planting, looks well on a carpet of golden flowers of the California Poppy. It also makes a good combination with the yellow-flowered Gladiolus *Niagara*, which variety, however, requires two weeks longer to produce its flowers and must be allowed for by earlier planting if simultaneous bloom is desired. The variety *America* with its massive spikes of delicate pink, combines well with *Niagara*; both flower ten weeks from planting. Another charming picture that I obtained last year was the *Baron Hulot* and *Golden Queen* Gladiolus, planted in a bed with a carpet of white Petunia or white Drummond Phlox. Gladiolus *Dieulafoy* and *Panama* are an appropriate combination with Sweet Alyssum Little Gem. I append a list of well-known varieties with approximate flowering times for each from date of planting, from which data the individual will be able to work out schemes to fit his particular desires.

NAME AND COLOR	TIME FROM PLANTING UNTIL FLOWERING
<i>America</i> , fine pink	10 weeks
<i>Baron Hulot</i> , dark violet blue	9 "
<i>Cracker Jack</i> , rich crimson	9 "
<i>Golden Queen</i> , light yellow with carmine blotch	9 "
<i>Halley</i> , salmon-pink	9 "
<i>Jean Dieulafoy</i> , primrose, chocolate blotch	8 "
<i>Mrs. Francis King</i> , light scarlet	11 "
<i>Mrs. Watt</i> , wine-red	11 "
<i>Niagara</i> , canary yellow	10 "
<i>Peace</i> , fine white	10 "
<i>Panama</i> , deep pink	12 "
<i>Rosy Spray</i> , white and rose	11 "
<i>Scribe</i> , light rose flaked red	11 "
<i>Tacoma</i> , pink marked crimson	10 "

Of the more recent developments of the Gladiolus, attention is focussed favorably on what is known as *Primulinus Hybrids*, which introduce us to a series of shadings of yellow flushed with pink and rose. The flowers are daintily proportioned and gracefully set along the spike in a somewhat looser arrangement than is characteristic of the older style of Gladioli.

As cut flowers for decorative purposes, they out-class the other members of the family. And, although of comparatively recent introduction, have achieved a decided popularity. These *Primulinus Hybrids*, which are the results of blending the species of *Gladiolus primulinus* (yellow) with the older types, flower nine weeks after planting, and they have the further advantage that as each plant throws up a succession of spikes, the flowering season is continued over a period of several weeks. Planted in combination with the yellow California Poppy as a ground work, a harmonious study in yellow is assured. As regards the depth of planting Gladioli, it should be remembered that, apart from all other considerations, deep planting has the practical advantage of obviating the necessity of staking.—G. W. KERR in *Garden Magazine*.

Making the Most of Your Cut Flowers.

BY E. I. FARRINGTON in *Syracuse Herald*.

If cut flowers are squeezed into a vase so tightly that the air is excluded they will be smothered to death. That is the reason why many bouquets do not last as long as they should. A wide-mouthed vase is the best kind to use because it admits oxygen in plenty.

Tall, slender vases are very attractive for long-stemmed flowers like carnations, but they have one fault—the water in them becomes warm very quickly, and this warmth is transmitted to the flowers, causing them to wilt. The water in vases of this kind should be changed twice a day.

Most flowers last longer if half an inch is cut from the stems every day. This cutting should always be done with a sharp knife. It is well enough to use scissors in the garden for convenience, but they have a tendency to squeeze the stems together, thus reducing the amount of water which can be taken up. A diagonal cut with a knife has just the opposite effect. It is especially important to have a slanting cut if the stems are to rest on the bottom of the holder for otherwise they will be sealed by this contact.

Peonies should be cut when the buds are only half-open, for then they will last longer. It is not uncommon for florists to keep them in cold storage for a month. The irises keep their color better when allowed to unfold in the house. If morning glory buds are cut very early and placed in a bowl on the breakfast table,

their unfolding can be witnessed while the meal is in progress, making a pleasant day's beginning. Although poppies are not usually considered available for cutting, they will last fairly well if the stems are singed until black in a candle flame.

Roses received in a wilted condition can be revived by placing the stems in very hot water. But if there is plenty of time it is better to fill the bath tub and let the flowers float there over night.

The best way to rob violets of their perfume is to place them in an open vase of water. The fragrance will be retained if the vase is covered with a piece of tissue paper, but the violets will keep equally well if simply wrapped in damp paper and laid in a cool place. As a matter of fact, they take their moisture through their petals and nothing is gained by inserting the stems in water. This applies also to orchids.

Dahlias will usually keep fresh several days if the stems are thrust into water as hot as the hand can bear and left there until the water cools, then being placed in their regular holders. Of course the leaves must be stripped from the stem before this is done. The foliage should always be removed from the lower part of all flower stems or it will foul the water in the vases.

If those who are growing Gladioli as comparatively new beginners only knew what a great fund of useful information is contained in the back issues of THE MODERN GLADIOLUS GROWER, we would get more orders for same. The supply is, of course, limited, and those who want them should order at once. The price is at the rate of 50c. per year for three years or more, or we can supply you with the bound volumes nicely bound with indexes for quick reference for \$1.25 per volume or \$3.75 for the three bound volumes to the end of 1916.

We are waiting to hear reports on earliness of bloom this year. Unless we are greatly mistaken *Gladiolus* bloom is going to be two weeks late on the average. The *Gladiolus*, however, makes good use of its time by rooting heavily in cool weather. Heavy rooting means superior strength of flower spike. The editor does not expect bloom from his *Pink Beauty* this year before July 15th, possibly a little later than this. Warm weather, however, would bring them on rapidly as the stalks are beginning to thicken now. The first planting of *Pink Beauty* and *Lily Lehmann* was made on April 12th.

MRS. AUSTIN'S TALKS.

A LESSON IN HYBRIDIZING FOR THE
AMATEUR.

It had rained sometime during the night and when I first went out on the porch I was somewhat dismayed by the dampness and forbidding aspect of the sky, but while I looked the clouds parted and the sun sent out long glistening rays and the lines of a rhyme that I had heard a child recite passed through my mind:—

A million little diamonds twinkled on the trees,
A million little maidens said—a diamond if you
please—

But while they held their hands outstretched
to catch the diamonds gay,
A million little sunbeams came
and stole them all away."

But I was not after diamonds. The porch overlooks the Gladiolus field and I was eagerly searching for the first bit of color. It had been a good "growing" night and I felt sure some buds must be opening. Ah, yes, *Pink Beauty* was waving Good Morning to me, and forgetting the diamonds, which were fast being stolen "all away," I hastened to the field. *Pink Beauty* was not alone, one large sparkling snowy bloom of *Bertrex* turned its face skyward and a little farther on a seedling boastfully flaunted nearly a full spike of its somewhat homely blooms. It had been given me by an amateur who observed the trait of earliness, and with its slender spike of many well set blooms opening nearly all at one time, combined with earliness it might be of value as a breeding variety. Like many ordinary ones it was loaded with pollen and I thought I must surely try a little hybridizing if only for practice.

Next to the open bloom of the *Bertrex* was an unfolding bud, and gently forcing the petals apart, I picked out the stamens with a pair of tiny tweezers, being careful to not injure the pistil. After this operation I removed the open flower and the remaining buds with one exception, then protected the unfolding bud and the tight bud beside it by covering them with a paper bag, leaving enough of the bare spike above to hold the bag in place and prevent it from resting on them. I then gathered the edges of the bag together and tied it below the buds. I also covered the spikes of the seedling and *Pink Beauty*. I had covered the *Bertrex* to prevent fertilization by bees or the windblown pollen, and the other varieties which were not emasculated, to prevent the pollen being lost.

The next morning I uncovered the seedling, selected one of the flowers with stamens freshly opened and well weighted with pollen. This I carried carefully to the *Bertrex* from which I removed the bag and with the small blade of my Gladiolus knife I transferred the pollen grains to the pistil of the *Bertrex* bloom but found it was not fully developed. (By looking closely this could have been observed before using the pollen.) Later in the day I again placed pollen on the stigma which was then ready to receive it, being covered with a substance which would retain it. The flower was again covered and marked by using a tag on which was written the date and names of the varieties thus:

Date——
Bertrex x Seedling

The tight bud of the *Bertrex* which had been kept covered was beginning to open and I again went through with the process of hybridizing, using pollen from the *Pink Beauty*.

Of course it was rather extravagant to take a whole bloom with all its stamens for the crossing but I had plenty of them. When the pollen is scarce I scrape it from the stamen with the point of the knife blade into a small bottle and use a tiny camel's hair brush to transfer it—a few grains are sufficient.

MRS. A. H. AUSTIN.

Westerbeek & Klyn Purchases
Randall Gladiolus Farm at
Benton Harbor, Mich.

We are notified by Mr. A. G. Pruyser, resident member of the firm of Westerbeek & Klyn, Sassenheim, Holland, that his company has purchased the Gladiolus farm of A. L. Randall at Benton Harbor, Michigan.

As our readers well know, Westerbeek & Klyn make a specialty of the Gladiolus. Difficulty in getting Holland shipments through this year has induced them to secure locations for growing in this country and the Randall farm at Benton Harbor will give them a fine situation for this purpose. Three million Gladiolus bulbs have been planted on the Randall farm this year, and Westerbeek & Klyn in addition to the standard varieties have secured some of the best novelties and rare and high priced sorts.

In addition to Gladioli the firm handles Dutch and French bulbs of all kinds. Darwin Tulips will be the next specialty which this enterprising firm will advertise.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
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Special favors to none, and a square deal to all.

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Growers are invited to contribute articles or notes over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.

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*Gla-di'-o-lus is the singular of Gla-di'-o-li.
Correctly pronounced with accent on the syllable "di."*

Publisher's Announcement.

It is our present intention to increase the size of THE MODERN GLADIOLUS GROWER to a three column page 9" x 12" beginning with January, 1918. THE MODERN GLADIOLUS GROWER is now in its fourth year and, owing to its comparatively small size page, many of our illustrations have suffered from lack of space, and besides we have omitted much extra good matter, which we really intended to print. We have also promised that we would increase the amount of matter printed on other summer flowering bulbs and bulbous plants in general. To do this increased size is necessary.

A still further increase in subscription rate will be necessary, but the increase will be small and it is our intention to never make the price of THE MODERN GLADIOLUS GROWER more than \$1.00 per year. Advertising rates will be unchanged for the same area of space, but the type page will be about twice the size that it is at present.

We make this announcement thus early so that our many old friends who have been reading THE MODERN GLADIOLUS GROWER in its present form will accustom themselves to the idea that it will be

enlarged. Although costs of publishing are still on the increase yet we will allow old subscribers until January 1st to renew their subscription for as long a period as desired at the present rate of \$1.50 for three years.

MADISON COOPER.

The Gladiolus Adopted as a City Flower.

We are informed by one of our subscribers, Mr. W. C. Dibble, of Salem, Ore., that his city has adopted the Gladiolus as the official city flower. Mr. Dibble reports that the Dahlia and Geranium were close competitors, but the Gladiolus won over every other flower. Here is a proof that the Gladiolus is gaining in popularity. From an almost unknown position a few years ago, it has during the past three or four years stepped into the public eye and popular approval to an extent which we would hardly believe possible. Let the good work go on. The Gladiolus deserves it. There are still better things in store for this particular flower, and this particular flower has better things in store for its admirers. The improved varieties which have been introduced during the past few years are a great

revelation to those who have known the Gladiolus for many years. Those who were not before acquainted with the Gladiolus and whose pleasure it has been to first become acquainted with the modern varieties cannot but feel that it compares most favorably with any other flower and in almost any respect.

Planting Gladioli in Succession.

For a long period of Gladiolus bloom a succession of planting is essential. It is our practice to begin planting as soon as the frost is out of the ground and continue at intervals of about ten days, up to June 15th or even July 1st. Corms planted as late as June 15th to July 1st may not bloom, however, if an early frost comes. Besides, such late planting does not give sufficient time for the proper maturity of a new corm. It must be understood, therefore, that planting for late bloom will result in very small increase, if indeed, a good new corm is secured. Early planting, which allows root growth during cool weather, results in the best bloom of the season, and the largest increase and gives the best development of new corms for the next year.

From time to time subscribers write with descriptions of Gladiolus bloom wanting us to identify the variety. Identification by a description is almost impossible and even with a sample of the bloom it is sometimes difficult. Few growers indeed are acquainted with most of the varieties in commerce; and as there are thousands of fine seedlings unnamed, the variety for identification is quite likely to be an unnamed seedling.

Reports on frost damage to Gladiolus corms in storage during the past winter, continue to come in, and we beg to repeat our suggestion that with Gladiolus corms in storage there should be located a thermometer in the coldest part of the room and during low temperatures outside this should be inspected from day to day and artificial heat provided if neces-

sary. It is discouraging to a Gladiolus grower to lose his stock of rare and cherished varieties from freezing and besides the loss is usually total.

The True Amateur.

Once in a while one meets a real lover of plants, one to whom his plants are friends and pets, with whom he associates in all his spare time, administers to their wants, is not happy unless they are happy, knows the needs even of the most exacting and intricate subject. Such men or women are all too few. They should be encouraged whenever met. The true gardening spirit is a matter of growth: it can be caught young, and it can be transmitted even to the elderly, but when the love of flowers and gardens has taken root in the heart of any one, we believe it is never lost.

The season of garden visitations has begun, if indeed it ever ends; but in these days of beautiful fresh green nature, the lambs sporting in the fields, the birds in the trees, the bees among the blossoms, and when Nature is bedecked in her most floriferous guise, the temptation is irresistible to go gardening and garden visiting.

Why not talk and write more than we actually do, even in our trade papers, about famous gardens and amateurs? It would seem almost more logical to talk about amateurs than about our business friends; at any rate there should be room enough for both. The amateur demands our finest and best; he also gives us many highly improved novelties, for he has leisure and the seeing eye, and can select and breed up things that are new and improved, or different or rare. He imports from European and other countries the things that it would not always pay the commercial man to trouble about, and by and by, as his visitors see the novelties, a sufficient circle of growers exist to make it worth while for the trade to secure and grow on a stock of the particular plant rarity or variety. In any case, it is largely through the enthusiastic amateur that gardening advances.—Editorial in *Florists' Exchange*.

There is a strong tendency for people who maintain gardens to increase their plantings of vegetables this year in preference to increasing their plantings of flowers. Considering the world shortage of foods this tendency is commendable, but flowers have their place and the esthetical must not be given up entirely for the practical.

WAYSIDE RAMBLINGS.

STAKING AND SUPPORTING GLADIOLI.

In keeping track of the different subjects discussed in THE MODERN GLADIOLUS GROWER I have an additional index of my own besides the one so kindly furnished by the publisher at the end of the year. Under the head of "Staking" I find where one of your correspondents has as many as a thousand stakes for this purpose. Two others have lately sent photographs of their Gladiolus gardens; one with a railing nailed on stakes at each end of the garden and double strands of string from one end of the garden to the other to hold the spikes upright; all of which must demand considerable expense, time and labor and besides would be found very objectionable to some as being unsightly.

In none of the past numbers of THE MODERN GLADIOLUS GROWER do I find any mention or hint as to a way I have used for keeping Gladioli erect and which may during the coming summer save all the expense and nearly all the time and labor of placing the above strings and stakes and not detract in the least from the tidy and natural appearance of the bed.

My way is not to stake at all. I plant fairly deep and in rows two or three corms abreast in the row and if after a storm I go out and find some spikes lying flat I simply, slowly and gently pull them upright and selecting one of the topmost long and narrow leaves I tie this leaf in a loose double knot with a similar leaf of a spike that is near and seemingly proof against all storms and I find this answers for the rest of the season. You can thus go over the row in a short time. I have sometimes found three or even four spikes near each other, all prostrate, and selecting a leaf from each have gently brought them to a perpendicular and after tying them they invariably remained upright for the rest of the season, each supporting the other like soldiers' guns do when "stacked." Where Gladioli are planted in beds this method can even be better employed than when planted in rows. The lateral strength of Gladiolus leaves is very great and no wind can break them.

I do not think I have ever found a Gladiolus spike actually broken or snapped off by the wind; what makes them topple over is the softening of the earth by the accompanying rain thus loosening the roots, so amateurs can go ahead and plant

following this method in confidence knowing they won't actually lose the flower spikes of their beauties.

Of course when flower spikes are wanted for hybridizing perhaps this method might not do, as greater care is necessary and stakes would be required.

B. F. STALNAKER.

ORIGIN OF ILLUSTRATION ON COVER OF
KUNDERD'S CATALOGUE.

TO THE EDITOR:—

I will be candid with you in my reply to your inquiry of the 12th, asking the name of the ruffled Gladiolus illustrated on the front cover of our 1917 catalog, by telling you I do not know. You may be much more interested when I inform you further that a seeming mystery is connected with the photo from which the illustration you refer to was made, for neither the photographer who made it nor myself know how to account for its peculiar appearance. You will observe the apparent insert of one extra large bloom at the top of the spike. As the lower blooms were at least four inches in diameter the topmost bloom would have had to be over eight inches across in order to make the proportions which you see in the photo. Now, as both the photographer and myself are certain that no attempt was ever made to secure such a photo you will realize why I say that an apparent mystery is connected with it. When I called for my photos the photographer asked me how this certain picture had been taken. After looking at it a moment I answered that it might be a double exposure, but on studying the photo a little closer we both agreed that this was not the true explanation since, as you will observe, the stem belonging to the lower flower is back of the large bloom at the top. It is easy to see how the large bloom could have been inserted for a photo but that does not account for the discrepancy in the comparative sizes, nor have I at any time attempted to secure "freak" photos as all my other photos and illustrations would show. In fact I have a photo with the same lower spike which does not show any trace of the large bloom at the top. The variety illustrated is an unnamed seedling of extraordinary beauty and ruffling and this was my reason for using it for an illustration of the ruffled feature in our 1917 catalog.

Probably some of your readers will be able to explain by natural method the remarkable appearance of this apparent mystery. Were I a mystic I could easily account for it on the theory of psychic phenomena.

A. E. KUNDERD.

WHAT AILED THESE LILACS?

We have shipped cut flowers to the trade for several years, and never had any complaints, and thought we had it all down fine.

The lilacs being exceptionally fine this year for Decoration Day, and being in the pink of condition a few days before the 30th, we shipped many thousands of them from 24 to 36 hours rail shipment—not far for cut flowers in cool weather such as we have had, and for sending fine, fresh stock. The lilacs were placed 12 hours in water before shipped; they were then tied together in bunches of five and soaked newspaper wrapped around the stems, as we do with all our cut flowers. Being short stemmed the underside of the flower heads might have gotten wetter in the tubs than other and taller cut flowers usually do. They were then packed in wooden boxes that were previously lined with newspapers and paraffine paper, and from 200 to 500 were put in each box—some shipments all lilacs, some had other flowers with them. Complaints came in that the lilac arrived in unsalable condition (the other flowers were fine) on account of being too old; one florist wrote that the petals were nearly all in the bottom of the box, although lilac does not drop its petals but turns brown and withers. Now what ailed this lilac? Was it packed too moist and did it heat? Should there have been air holes bored in the box, as we saw once recommended for Peonies? And should the bunches of flowers be wrapped separately in paper?

Now the queer thing about this is, that we made some small shipments in pasteboard boxes and the lilac arrived in those same towns in the pink of condition; it was the same aged lilac and was treated the same way, and packed the same way, (no air holes) and there were many less to the box. We pack and ship thousands and thousands of Narcissuses, Tulips and Daffodils every spring, using entirely the long pasteboard boxes for packing, putting about 100 to the box and they always arrive in perfect condition as far as 48 hours. We pack our Gladioli in the wooden boxes, six to the bunch, wrapping wet papers around the stems, and 100 to 200 to the box, with no air whatever, but what can come through the wooden sides and the lining of newspaper and paraffine paper, and they always ship well.

But what ailed the lilacs? Can and will anyone be good enough to enlighten us on the subject, and point out to us what we did wrong in the lilac ship-

ments? And why did the small pasteboard shipments arrive in the pink of condition?

We will soon commence the shipment of cut Peonies, and shall pack them in the same way we do our Gladioli; we trust with the same good luck.

THE PUDOR FARMS.

Note by the Editor—

It may be that the close confinement in a non-ventilated box would account for the trouble experienced, especially as the express cars might have been heated in transit. Wrapping bundles in paper separately we believe would be an improvement as would also the ventilation of the boxes. Live plants or cut flowers should not be shipped in too large bulk on account of heating and danger of crushing.

However, we know that Gladioli are successfully packed in perfectly tight wooden boxes and shipped long distances, but in this case they are wilted before packing and are packed tightly.

Cannot some of our readers offer suggestions along this line which will be helpful?

USING LIQUID MANURE.

Those who use liquid manure for their Gladiolus beds this summer will invariably find the directions are: "Get a quantity of water in a barrel or tub, make a bag, put the manure in the bag, hang the bag in the water," etc., etc. Now, if you want liquid manure there is no necessity for all this fuss. Just get a tub or barrel, put the required proportionate amount of water and manure in it and after about 24 hours the manure will be found compactly at the bottom just as clear of the rest of the water as if it were in a bag. The top manure water can be dipped off practically clear, with a stick vigorously stir the manure again and the next day all the manure will be found at the bottom again. Of course, keep the tub or barrel tightly covered for obvious reasons. This obviates the particularly unpleasant job of filling and emptying a bag. When the virtues of the manure have been spent the odorless remainder can be put as a mulch about some favorite "pet" of the garden or on the Gladiolus bed to be hoed in. This is a time and trouble saver.

B. F. STALNAKER.

The market for cut bloom may be affected by the wave of economy which war has brought in its train, but it is to be hoped that the slogan "Business as Usual" will be adhered to.

Growing Gladioli During a Severe Drought.

The summer of 1916 was perhaps one of the most trying summers ever experienced in this country in growing the Gladiolus. Not only did the plants suffer for want of rain (in most parts of the country) but the excessive heat, which lasted from July 1st to August 30th, (and in some sections still longer) was very trying, especially to the blooms and young stock from bulblets.

In this section (central Michigan) we had very little rain all summer. On June 28th we had a good rain, and not again until Aug. 9th did we get one drop of rain, and then only enough to soak into the ground about three inches. The next rain fall was Sept. 10th, when we had a good heavy fall which lasted several hours, penetrating the ground to a depth of 14 to 16 inches. The weather then cooled off and from this time on we had sufficient rains, with cooler weather, which helped the corms grow and produced some better blooms.

The excessive heat, from 95° to 105°, day after day and the long drought forced the blooms ahead of time, with the result that the blooms were not fully matured, and a large percentage of the first buds would dry up on the spike, and only the few remaining top buds would open. To leave a spike on the plant after it had started to show color, and exposed to the hot rays of the sun for a day, simply meant that the petals would be burned to a crisp for at least half an inch deep, which utterly ruined the bloom, and in order to get any blooms at all, it was necessary to cut the spike early in the morning, as soon as the first bud showed color, and place them in water, in a good light, cool, well ventilated cellar. So excessive was the heat at mid-day, that blooms standing in water in the shade on a porch or verandah, would wilt and droop until the night air cooled the temperature.

Up to Sept. 10th, the corms had made very little growth and the young bulblets had not developed their natural leaves, but from this time on all the stock, first and second year, made rapid growth, and at the time of harvesting, Oct. 16th to 25th, had made an exceptionally fine growth, a large percentage of the second year corms measured one and one-half to two inches and some even better, while the one year stock from bulblets, attained a size of three-quarters to one and one-quarter inches.

In order to retain and derive the full benefit of the moisture that remained in the ground during this long dry spell, the cultivator was used once every week, and a dust mulch of over four inches had accumulated by the time rain did come, which also made it an easy matter for the water to soak into the ground to a greater depth. Not a single weed was permitted to grow to rob the plants of any of the moisture, and the heavy dew which we had many nights during this hot spell, brought temporary relief.

It must be remembered that in order to retain the moisture when a long dry spell may be expected, cultivation should commence right after each rain, never permit the ground to become crusted. To allow the ground to become bone-dry during a long, dry, hot spell, before cultivation is started, might prove disastrous if cultivated too deeply.

Early planting is by all means advocated, for the stock then derives the full benefit of the spring rains, and attains a strong, vigorous root growth before hot weather sets in, and the young plants are, therefore, able to better withstand a long drought.

T. H. FULLER.

If you are invited by the management of flower shows or any one else interested, to send bloom expecting somebody else to stage it properly, our advice is: don't do it. We speak not from impressions or hearsay, but from experience. If you want your business done attend to it yourself. If you do not care whether it is attended to or not, send your flowers for someone else to stage. We may have something more to say on this subject next month. We have a personal experience to relate which may be interesting. Furthermore we have seen flowers shipped in, expecting the manager of the flower show to stage them and have seen them badly neglected. This does not always happen, but it is quite likely to as a flower show is a busy place and there is always more work to do than hands to do it. Don't be tempted to send your flowers for someone else to handle, unless you know who that someone else is and have confidence that he will attend to it conscientiously.

Interest in the Gladiolus is greatly stimulated by an accurate knowledge of the named varieties. There is no better way to become posted on named varieties than to attend the flower shows. The next best way is to get a good collection of cut flowers with the varieties properly labeled. Your nearest grower may be able to supply you.

Money in Flowers.

There is money in raising hardy flowers for sale, and there are few pleasanter ways of making money for a woman who has the ground and can give only her spare time to it. To be sure, there must be considerable time to spare if anything worth while is done with the flowers. And there must be a market for the flowers when they are ready for disposal. Flowers are always in demand for weddings, funerals, luncheons and all sorts of solemn or festive occasions. Never have flowers been so much used as at the present time. The point is, to bring the flowers to the notice of the possible customer. The best price for any product is obtained always by selling direct to the consumer, but a person starting in to raise an acre or less of flowers may find it a difficult matter to attract a sufficient number of customers to dispose profitably of the flowers during the few weeks they are in bloom. Everything depends upon the location. If there is no nearby florist and the grower is located near a good-sized town, she may reach customers by advertising in the local paper and by posters. It is more likely, however, that she will do best to contract with some retail florist in a neighboring city to take her flowers at so much a hundred. This price will be low compared with what she could get selling them by the dozen to her own retail customers, but, on the other hand, all of her blooms are contracted for, and if she tries to retail them herself, unless very sure of her market, many of them may go to waste. If the retailer buys the flowers outright at so much a hundred he will have to stand any loss there is, but if the flowers are placed with him on a commission basis, the grower stands the loss, although there is also the chance that she may get a higher price for her wares than when selling them outright.

The woman starting in to raise flowers for the market will do well to select some good annual that will thrive well on any soil and be not too particular as to heat or to cold. Also she should specialize on one, two or three kinds, instead of dabbling in everything and having no particular kind of flower to offer to a retailer. Let her be able to say to the man with whom she hopes to place her flowers: "At such and such a time my Asters will begin blooming. During the next few weeks I shall probably have several thousand blossoms to dispose of. What will you offer me for them?"

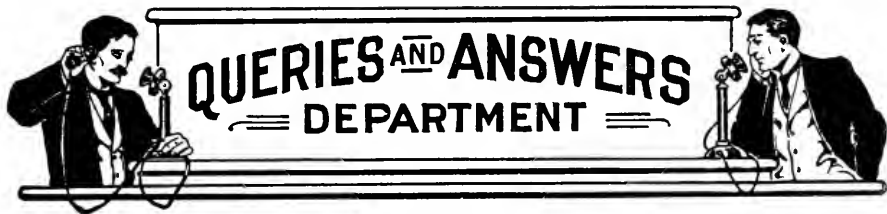
There is probably no hardier or more

dependable flower than the Aster or the outdoor Chrysanthemum. They will grow on any soil that is soil at all and they withstand frosts well. They are popular flowers and make up beautifully for almost any purpose. The single China Aster in the white is a particularly pleasing bloom and grows on a long stem. Double Asters, too, are good sellers. Both Chrysanthemums and Asters have leaved stems, so they can be attractively bunched without additional green matter, and this means something to an amateur grower. Whichever flower is decided upon, let there be a large proportion of white, with just enough rows of the colored to give variety in bunching when that is wanted. As a rule, more white flowers will be called for than colored.

A good way to start the plants is from seeds in a hotbed. Lacking this, sow them outside as soon as the ground is ready to work and cover the bed with cheesecloth, weighted down at the edges. The seeds start as readily planted thus as when sown in the open, and the plants are more vigorous than when grown under glass. The cheesecloth is sufficient protection, however, so that the seeds can be started several weeks earlier than if sown out of doors without a covering. When the plants are several inches high they should be transplanted into rows; each variety and color should be grouped. The plants should be cultivated and kept free from weeds. As soon as they begin to blossom the flowers should be cut. Neglect in picking the blossoms causes the plant to cease blooming.

The flower grower should save her own seed. In this way it is possible for her to select the best of her stock and perpetuate it each year until she has flowers of a distinctive character which create a demand for her growing—JANET THOMAS VAN OSDEL in *National Farmer and Stock Grower*.

The above article on growing cut flowers for sale is worthy of careful consideration. Those who have grown Gladioli are well aware that there is no flower which is more satisfactory and which has a longer period of bloom and gives a greater range of color. If there is any doubt on this point, just bring to the attention of customers for cut flowers the Gladiolus as compared with any other flower that they are familiar with and have been in the habit of using. We know what the decision will be. The Gladiolus is supreme, although perhaps requiring more care than some of the better known flowers.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

The Tarnished Plant Bug and Other Dahlia Pests.

TO THE EDITOR:—

Will you kindly answer a question for me through the columns of your magazine? Last year out of a very large number of Dahlia bulbs planted, I did not get more than two or three blossoms. A flying bug, I believe called the tarnish bug, ate all the buds off, or sucked the juice from them so that they blackened and shriveled up. What treatment can I give my Dahlias this year against this tarnish bug? I would much appreciate it if you could advise me. L. E. M.

Answer:—I think the correspondent is right in determining the pest attacking his dahlia plants as the tarnished plant bug. This small, obscurely colored, brownish insect is abundant everywhere throughout the summer on many kinds of vegetation. Over fifty cultivated plants are known to suffer from its attacks. Dahlias and chrysanthemums are especially liable to injury.

The insect hibernates in the adult state under stone walls and in dead leaves and grass in wood lots and along fences. The bugs come out from winter quarters very early in the spring and after feeding a time the female deposits her eggs in the tender portions of many plants. The young bugs are greenish with black spots. They mature in about a month thus producing several generations each season.

In feeding, the bugs puncture the tender portions of the plant with their beaks and suck out the sap. On Dahlias they puncture the tips and unopened buds and thus stunt the plants, causing them to stool out close to the ground. The injury also prevents the opening of the blossom buds or produces imperfect flowers. Many eggs are often deposited in the buds and tender tips. The bugs are shy and active and very resistant to sprays. There is no insecticide material known that can be used successfully to keep them off dahlia plants. If the bed is not too large the plants could be protected by screening with mosquito netting. It has also been noted that plants are less subject to attack when grown in partial shade as on the north side of a building.

C. R. CROSBY.

Answer:—There are several reliable insecticides that will destroy the Dahlia's pests, any one of which can be secured in most all parts of the United States.

Arsenate of Lead or Pyrox are as good as anything for all the pests of the Dahlia, including the tarnish bug.

A spraying once or twice a week for the first three or four weeks previous to the time the Dahlia will commence to blossom will destroy all these pests. Any of the following are reliable, either in solution, or any other form, solution preferred: Nico-Fume Liquid, Tobakine, Whale Oil Soap, Nicocide, Pyrox, or Arsenate of Lead.

Although wood ashes are not as effective as the above they are also good, and in addition assist in fertilization.

J. K. ALEXANDER.

Growing Tulips Commercially.

TO THE EDITOR:—

For commercial growing should Tulip bulbs be lifted and when? Rexford says yes, Mrs. Ely says no. In cutting the flowers to get long stems I am told to cut right down to the bulb. Will the latter ripen under these conditions? What are botanic tulips? H. C. S.

Answer:—My experience has taught me that it is best to lift the Tulip bulbs every other year, for two reasons: First, you get better increase, and second, the ground can then be newly prepared for resetting, although, as with all bulbs, they should be reset where bulbs have not been planted the year before, to get best results as to size of flowers. The bulbs should not be lifted until all green has disappeared from the tops, or even better, when the leaves have dried up.

In cutting the flowers, as with all bulbs, we must remember that the bulbs serve as the food storage organ of the plant, and the starch to be stored is manufactured by the leaves, hence you must leave at least the bottom leaf in cutting.

Botanic Tulips are the original native species, from which the cultivated varieties are produced by hybridizing.

C. S. SHELDON.

Frequency of Irrigating Gladioli.

TO THE EDITOR:—

How often should Gladioli be irrigated during the period between blooming and harvesting? Here in California we have no rain during that period.

C. M. S.

Answer:—Irrigation, no matter in what climate nor under what conditions, is a question of judgment and experience. It depends on temperature, duration of sunshine and character of soil. We should say that in California perhaps during the warmest weather irrigation as often as once a week might be desirable and perhaps at other times irrigation might be necessary only once in two weeks. The quantity of water applied would necessarily have some bearing on the frequency of application, but we wish to caution in this connection that plenty of water at longer intervals is more desirable than less water at more frequent intervals.

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From Pennsylvania—I wish to thank you for your liberal treatment.

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From Illinois—I will say, to deal with such men as you, business is a pleasure.

The above kind words are extracts from letters and cards recently received. We certainly appreciate the many words of satisfaction from our customers, realizing that a satisfied customer is the best advertisement.

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THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
Published Monthly by Madison Cooper, Calcium, New York.

Vol. IV.

AUGUST, 1917

No. 8



GLADIOLUS—ROSE GLORY.

One of A. E. Kunderd's new ruffled varieties. A very large and beautiful flower of purest rose-pink color with deeper marking in the throat.

What Soil and Culture is Best for Gladioli?

By B. F. STALNAKER.

FROM my own past experience, I greatly differ with the writer as to the ideas conveyed in an article in the March issue of THE MODERN GLADIOLUS GROWER, under the caption: "To Grow Prize Winning Gladiolus Bloom." The article is in reference to Mr. Kunderd's specific instructions in his 1917 catalog as to the quantities of manure and other fertilizers necessary to grow really fine Gladioli. Commenting on Mr. Kunderd's instructions, the writer says: "We wish to warn those interested that, forcing (Gladiolus) growth as suggested, is likely to result in diseased or worthless corms for the next year's planting—if growth is forced this year it is quite likely to result in such an exhaustion and possible disease that the new corms cannot be depended upon for best results the following year," etc.

I am unable to gather from the above whether the writer makes these assertions from his own actual experience and that he has actually found his resultant Gladiolus corms from such fertilization to be as he states; or that he only surmises such would be the case. But my own experience has been that if, from such fertilizing, the grower gets "Giant Gladioli with blooms six to seven inches across and spikes five to eight feet tall," using Mr. Kunderd's words, he will also find that the resultant corms will be extra large and fine and a large quantity of bulblets will be found around the corm. (This, of course, depending upon the variety, as some never produce, under the best culture, much increase; also the age of the corm planted; and besides it is understood that the spike is removed for cut flower purposes, and that enough leaves are left to properly mature the corm.) If the grower is going to get "diseased and worthless corms" he will be fully apprised of that fact long beforehand, during the summer, from the inferior and weak growth of the spikes and poor bloom. The worthless corms I hardly think will come from the magnificent bloom and spikes five to eight feet tall.

I am led to write about this from the fact that nearly all catalogs of, and articles in floral magazines on, Gladioli put, it seems to me, undue emphasis on the fact that Gladioli are so extra easy to grow. This seems to me to be rather pernicious and bad for the business in general, as

many amateurs will be discouraged and will not buy again after being disappointed, when the growing is said to be so easy. In fact, a great many varieties are hard to grow, and to make a real success of growing uniformly good cut flowers with a financially profitable increase of bulbs, bulblets and planting stock requires considerable fertilization and manipulation of the soil by the use of cover crops, lime and seeing that the three elements needed for the growth of all vegetation: nitrogen, phosphorus and potash, are present, in the proper proportion, in the fertilizers you use.

From my own experience, during the past years, I have found that fertilizing, as Mr. Kunderd directs, far from being harmful, is the *only way* to get much increase at all in size or multiplication of corms and bulblets—especially of some varieties. I started to grow Gladioli here on my home plot, which is a poor piece of soil (though I didn't know it when I began.) I found my original stock was dwindling, instead of multiplying, and of what few bulblets I planted, hardly any came up at all. I gave good culture and had the city water mains and a hose to draw upon in dry weather. I fertilized with bone meal scattered in the bottom of the row, and sheep manure on the surface hoed in, yet I was failing to grow them satisfactorily.

So I decided that the soil was too compact and the next year I tried out a special bed, digging out all the soil in it and replacing with the following soil mixtures made up in the proportions named. I was afraid of using other chemical fertilizers and used what I thought was safer.

Mixture No. 1.—Twenty-four parts sifted ashes from hard coal (coal ashes have no fertilizing value; they merely lighten the soil); 24 parts of the poor clay soil on my place; 18 parts sifted sharp builders' sand; 1½ parts of bone meal.

Mixture No. 2 (richer than No. 1).—Thirty-six parts dark leaf mold; 18 parts sifted sharp sand; 21 parts sifted hard coal ashes (no fertilizing value); 1½ parts bone meal; 9 parts sheep manure.

The above mixtures were piled up and turned over many times.

You can substitute the words pint, quart, gallon, peck or bushel for the word "part" used above and mix up any

quantity you wish. The proportion will always remain the same.

Besides the above I had a pile of old rotted horse manure (not fresh) and a pile of clean builders' sand to draw upon.

Then I took the corms I wanted to experiment with and planted them as follows. After digging out the beds as mentioned on the original clay subsoil, I spread the old horse manure at the rate of one and one-half gallons upon a space 14 inches by 14 inches, or 196 square inches. I am giving exact figures and details, my planting book being before me as I write, with all the above jotted down in it. On top of the old horse manure I put exactly one gallon of mixture No. 2 (the richest) at the same rate, 14 x 14 inches of space; then a thin layer of sifted builders' sand; then I planted my corms, covering them again with clear sand. On top of this I put mixture No. 1 (the poorest) covering the corms with this to a depth of about four inches. The point was to give the roots the richest mixture and to have the top merely porous. (I am giving the fertilizers and soils that were available in my position and case. I am laying down no exact laws nor do I claim to at all to be an authority, other persons in other locations would probably have access to other better soils and fertilizers.)

Now, let's see what the actual results were. I will select at random from planting book for that year. With my first inexperienced culture, from one corm of *Liebsfeuer* I got one corm and two bulblets. With my fertilizing method above, from the resultant old corm, (not using a new corm) and discarding the two bulblets, I dug two corms and eighty bulblets. From three corms of *Daisy Rand* I got, with old culture, three corms and four bulblets—with the new culture, discarding the four bulblets and planting only the resultant three old corms, I dug six corms and thirty-eight bulblets; one corm of *Berlinia*, old culture, one corm—using this same old corm, with new culture, one corm and twenty-two bulblets. *Glory of Holland*, four corms, old culture, I got four corms; new culture, using these same old corms, five corms and twenty-nine bulblets.

It will be noted that in every case I used very inferior, and what some would have thrown away as worthless, corms that I had grown before; the bulblets produced from old culture being planted elsewhere, the last resultant corms and bulblets coming from planting old corms only.

It must be remembered that my soil was

poor in the first place and many may have perhaps a naturally rich soil and are able to grow fine Gladioli without all this trouble. But I found out to my satisfaction that fertilizing when necessary spells success and when growing otherwise, means failure. I think one reason for the improvement in the stock was the sifted coal ashes and the sand lightening up the soil. He who expects to grow Gladioli with much success in poor soil, as some of the directions would almost seem to lead you to believe, from my point of view, is going to be disappointed.

The writer of the article referred to, in the beginning of this communication, speaks of Mr. Kunderd's use of manure and fertilizers as "forcing growth" detrimentally. Hasn't he got his ideas mixed with the thought of how florists force bulbs in the winter, of other flowers for their bloom alone, and throw away the bulbs afterwards as worthless? This is naturally the case, as they make no attempt to grow them on afterwards to ripen the foliage. They are in the flower producing business and not the bulb growing business. The bulbs they force are grown in another part of the world out of doors in a climate and soil especially adapted to that special flower and the flower is already nestling in the heart of the bulb when they receive it. They could go right on after forcing it and grow and ripen it and little bulblets would form around it and they could grow them on and produce their own forcing stock themselves, but it doesn't pay them to do it as their greenhouse is needed for other things; so naturally they throw them away and buy a fresh supply much cheaper than they could produce it.

But the Gladioli grown by Mr. K. are, it seems to me, not being forced in the florist's sense. They are being grown out of doors under the summer sun in a climate and soil adapted to them and are receiving merely a plentiful supply of food elements to bring them to great perfection and why the resultant corms should be "exhausted, diseased or worthless" I can't see from my experience.

Several years ago I visited a very large grower's place on Long Island, about fifty miles out on the north division of the Long Island railroad. This place comprises, I think, about 800 acres, being larger than Central Park, consisting from its appearance, of many old farms bought up and thrown together. Part of this great tract lies on the north side of the railway and the other part on the south side of it. It is not all level, but consists of hills and dales and winding roads and

woods of old native cedars and other forest trees, old orchards that once stood around old homesteads, etc., so large in fact that the owner and one of his employees one day got lost in it and he had to send the employee to the top of a tree to find out just where they were. The fields of Gladioli are not all together but naturally scattered, as I suppose the same fields are not used for Gladioli year after year; and it was a pretty sight to suddenly make a turn on one of the well kept roadways and be greeted in the distance with what seemed to be a little lake of beautiful pink color, so solid the spikes could not be distinguished at that distance, but you could guess what they were. In contrast to the dark velvety green of the Junipers (cedars) the view was quite effective.

One of the most interesting things along the railway near the pretty modern concrete stucco depot and the large storage bulb house, upon a railway siding were several freight cars and dumped on the ground next these cars, were almost veritable hills (you could hardly call them piles) of manure. It was not being hauled out at that time as it was the blooming season and I wondered to where it could all go. Since growing a few of the bulbs myself I can imagine now to where a good portion of it went.

Beginners, when they pay \$5 to \$10 for what seems to them a mere handful of corms may judge from the foregoing that the cost of producing them and the necessity of keeping up the soil fertility at all times, is not to be considered lightly.

The reader is not to infer from the foregoing that I am insinuating that the large grower spoken of above uses anything like the methods I have given herewith as the way I improved my culture of Gladioli. In the first place I specifically stated that my soil was very poor, while from the large grower's extensive area, he is no doubt able to find many rich pockets of soil that he can utilize for growing his Gladioli. In the second place it would be physically impossible for him to pursue any such methods as mine. Nor is it to be inferred, when I mentioned the large amount of manure that I saw piled alongside of his estate, that he uses any such crude method as merely digging under this more or less fresh manure and planting the bulbs in such prepared ground. I suppose the manure is used to keep up the general fertility of the soil and could not be used directly unless it was very old and rotted which I specifically stated was the state of the manure that I used.

In conclusion will say that from my

experience I have always found that when I have been so fortunate as to get spikes of any varieties of Gladioli "five to eight feet tall" with very vigorous growth and large bloom, no matter what the method used in getting them, I have always been rewarded with large healthy bulbs and plenty of bulblets. Whenever I fertilized injudiciously, using too much, it always showed the effect in spikes only a foot or less high with poor or worthless corms. Of course, it is possible to use too much fertilizer to the detriment of the plants but the sign of using too much will not be found to be blooms "six to seven inches across and spikes five to eight feet tall."

Finally from my experiments and from personal observation of three or four large Gladiolus farms on Long Island, and in fact the gist of this article is: that Gladioli do best in a rather rich soil and that any old soil will not do for them, the soil must be rather extra carefully prepared and kept in a superior state of cultivation and fineness; and that to get good results commercially requires somewhat more skill and attention (not to mention care to keep the varieties separate and true to name) than the field culture of many other flowers and plants demand. Some to the contrary, notwithstanding, who almost seem to suggest that any old soil or location or culture will do for Gladioli.

Note by the Editor—

Mr. Stalnaker has offered some suggestions which are interesting, but anyone who undertakes to force the growth of vegetation by any kind of unnatural or stimulating means is, if the scheme is carried to an extreme, inviting disaster. The back files of THE MODERN GLADIOLUS GROWER show various troubles resulting from an excessive use of chemical fertilizers, stable manure, etc. It will bear repeating, therefore, that any one who attempts to grow exhibition bloom by heavy fertilizing, unless he is unusually conversant with the use of the materials he employs, is quite likely to not only fail to get exhibition bloom, but to get an absolute crop failure. Some of our most experienced growers have made mistakes of this kind at different times. We do not say that an experienced florist cannot use stimulating methods and produce satisfactory results, but even in this case, the resulting corms are often diseased. This does not mean that if fine bloom is obtained the corms will be bad, but when an attempt is made to force fine bloom it often results in failure to get any bloom at all and worthless increase besides.

MRS. AUSTIN'S TALKS.

CONSERVATION AND PREPAREDNESS.

The call to increase the quantity and to conserve food was responded to with true American patriotism, and it is safe to say that there are more gardens in the United States this year than ever before. Many of the war gardeners are beginners in soil tilling and they make hard work of it. After the ground was plowed and harrowed, armed with a shiny new hoe, hand cultivator and the motto "Dig" in mind they started in. Being unaccustomed to gardening they tire quickly, the work is harder than they thought. It looked easy when they had watched a farmer, but they stick to it enthusiastically, happy in the thought that they are doing something for their country by the sweat of their brows. It would be discouraging indeed if after all the hard work the crop would prove a failure, but if these enthusiasts learn *how* to garden this year they will have made a great success even if the crop is not a bumper one.

One of the first and most important things to learn is the conservation of strength. One should not work continuously until nearly exhausted, grimly determined to finish his row or the cultivation of a certain plot before he stops for a breath or two. The farmer who keeps his horses in the best condition and gets the best work from them knows that because of frequent short rests, perhaps three to five minutes, that he has conserved their strength, and yet how often do we see horses worked until nearly exhausted and then given a long rest. A waste of strength and time.

As practice makes perfect, you new gardeners have probably learned that to keep the weeds in check it is not necessary to strike the hoe deeply, and perhaps you have learned that *best of all* way and that is to kill them before they come, by keeping the soil worked. Perhaps you have learned that the *shallow* surface dust mulch, even less than an inch will conserve the moisture as well as your strength. Do not think that it is not worth while to begin unless you can have a whole or half day's time to work, but watch for the little odds and ends of time. Have all tools sharp and convenient to your work so that you can use those moments to good advantage, and it is surprising how much can be done in even five minutes. Study the soil, learn the needs of your plants, conserve both time and strength and

gardening will not be hard, disappointing work, but a most fascinating pastime.

Preparedness? Yes; preparedness for war and the war garden we *must* have, but let us also prepare for a Peace Garden. The soldier bids farewell and as he pauses for the last sweeping glance he sees not only the war garden, but the trees, the vine-draped house, the clumps of shrubbery, the profusion of flowers shedding their sweet fragrance. It is a beautiful, never to be forgotten picture, and the dear ones are all connected with it. What a gay time they had planting the Iris. Mother called it Flower de Luce, and how thick and rank the rose hedge is. He helped to plant it. His gaze reaches the flag and the terrible purpose of the enemy rushes over him. With hand raised in salute, tightened lips and flashing eyes he pledges his heart's blood in protection of that flag and the preservation of the American Home, the greatest of all institutions.

What kind of a picture will it be when he comes back crowned with victory? Must the beauty be all gone and only the practical left? The practical part that means *Bread must come first*, but by conserving time can we not all add five or ten minutes extra to our gardening hours and spend them in making the American home a more *beautiful* haven of peace and rest, that when our soldier again enters its sacred portals he can say with eyes resting on the flag: It has been preserved and it was worth the struggle.

MRS. A. H. AUSTIN.

We quote from an editorial in the *Florists' Exchange* which gives a strong endorsement to the work of the modern Gladiolus hybridizer as follows:

"Of the several flowers now in the public eye, which have responded readily to the art of the hybridist, none have made more rapid and sensational improvement than the Gladiolus. The exhibitions of this flower at various places during the present season have brought out material which is nothing short of marvelous and one of the most interesting facts in this connection is that the varieties showing the greatest advancement over the old types are the productions of American specialists. Unfortunately for these earnest workers the emoluments from their triumphs have been and are likely to be very, very small so long as conditions are such that foreign growers can swamp our markets with stock of our own best productions at prices with which home competition is next to impossible."

Gladiolus Growing in the South.

In growing Gladioli for market I find there is a great deal yet to learn, as well as from an amateur and a pleasure standpoint. I am growing about 150 different varieties for exhibition and pleasure, (about two thousand bulbs that I keep separate from my commercial stock), and every July I have a free Gladiolus show at my store. Last year I exhibited 126 varieties and it created quite a sensation and they were admired very much.

I grow from four to five acres of Gladioli for market, ten or twelve of the best commercial varieties, some of the newer as well as the older standard varieties. Here in this part of the country (Tenn.) or in North Carolina the cormels can be planted either in fall or spring. I prefer spring as sometimes the fall rains begin before the bulbs are cured enough to plant, consequently the ground is too wet to plant. I plant as early in the spring as the weather permits, from the first of March on till June. I plant in rows, placing the bulbs from two to four inches apart alternated in a double row; these double rows three feet apart for horse cultivation. I plant from four to six inches deep and as soon as they are one and one-half to two feet tall I hill them up a little, making the bulbs eight to ten inches under the ground. Being in a double row and so deep the wind cannot blow them over causing crooked stems.

I am beginning to cut at this date, (June 30th) as they are beginning to bloom in quantity. (However, the season this year is about ten days later than usual). I cut just as the first flower begins to open.

In packing to ship, all varieties are graded and kept separate, tied twenty-five in a bunch and placed in water after being tied. (You need not be in any hurry about putting them in water after cutting, if they wilt a little so much the better as they are not so apt to break while handling). After being in water a short time they can be shipped.

My method of packing is standing the bunches upright in crates. Each bunch is wrapped tightly in paper, then closely packed upright in the crate already prepared to receive them. I only put a few sheets of old newspaper in the bottom of the crate for the stem end of the bunch to stand on, and I use no ice whatever. Should they arrive wilted at their destination it will not injure them at all. They will arrive in much better condition than if packed in a flat box and iced. I packed and shipped something over 150,000 in this way last season and did not have one

complaint. All of my customers complimented me very highly on my way of packing and shipping. DIXIE.

Annuals.

Annually there is a story in these columns about annuals. Persistently and perpetually the editor insists that the only real fun in growing flowers is in growing annuals. Of course perennials like phlox, etc., are fine and do not require replanting every year, the Gladiolus if not the queen of flowers, is at heart a princess and all the flowering shrubs we have place for and can afford are a delight, but for real enjoyment plant annuals.

Heading the list as well as the alphabet, comes asters, late branching, early branching, ostrich plume, incurved, comet and a dozen others. The modest and lovely sweet allysum, balsam, coreopsis, celosia, gaillardia, heliotrope, larkspur, marigold, mignonette, nasturtium, petunia, phlox, portulaca, poppy, ricinus (castor bean,) verbena and ending the alphabet with zinnia.

Allowing for three packets of good asters the entire list of seeds can be had for less than a dollar.

None of these are pampered greenhouse pets nor none need be planted in boxes. If one is eager for very early asters the seeds must be planted in March or April, but the finest asters are the ones that come on as the days are getting short and the evenings cool. The aster belongs to autumn days and when we force it into bloom in the heat of summer we lose something of its rarest beauty.

Plant all of these in the open, in the vegetable garden and not in stingy little flower beds or borders.

Plant the seeds early in May in soil that has been made fine with a garden rake. Make shallow furrows with a lath sharpened on one edge.

Cover lightly, very lightly, for the smaller seeds with soil sifted through a fine mesh screen and press the soil firmly over the seeds. Lay boards over the rows for a few days and until plants appear to avoid washing and baking of the soil.

All the rest is just like caring for a patch of onions or carrots. Thin the plants, cultivate often and water only if absolutely necessary. The results will repay you a hundred or a thousand fold. Flowers from July to frost, and the finest of all flowers. Nothing can quite compare with a garden of annuals. Try it.—*Wisconsin Horticulture.*

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No. 8

*Gla-di'-o-lus is the singular of Gla-di'-o-li.
Correctly pronounced with accent on the syllable "di."*

If You Would Have Your Business Done, Go Yourself, If Not, Send.

In another column appears a note asking for information about exhibiting at fairs. One of the points on which information is requested is whether it is necessary for the exhibitor to go in person.

The experience of the editor in shipping flowers to a Massachusetts Fair in 1916 may serve as a guide. At the earnest solicitation of the superintendent of flowers he sent as fine a lot of bloom as he ever shipped, to the extent of between 200 and 300 spikes. The superintendent promised to make proper entries for same and look after staging.

The bloom arrived in good order and was, so far as we know, properly staged, but when it came to competing for prizes, that seemed to be another matter. Inquiry of the superintendent and of the secretary of the fair in question has not as yet been able to determine whether the flowers were entered and were eligible to win a prize or not, but anyway, the flowers were not judged in competition, and it is assumed that they were not properly entered.

Therefore, the heading of this article

tells the whole story—if you want anything attended to, do it yourself. If you do not care whether it is attended to or not, leave it to someone else. They are more than likely to neglect it, and if they do not it probably will not be attended to as well as if you went yourself and attended to it yourself.

If any of our readers have had a similar experience and care to relate it for publication, we would be glad to hear from them. Abuses of this kind should be thoroughly discussed and measures taken for their correction where possible.

What About Old Corms?

The question is often asked as to what happens to Gladiolus corms as they get old. We have not seen a complete detailed answer to this question but expect to be able to answer it by our own experience shortly.

C. G. Morris writes us that Cornell Extension Bulletin No. 10, contains the following statement: "With age the flat corms frequently send up five or six shoots causing the production of not one or two blooming-size corms, but small ones that need a year's growth before they will bloom again."

Our own experience has been that the divisions resulting from old corms are quite as likely to be first size as to be small size and the statement above quoted does not say whether bloom from the divisions after a year's growth may be expected to be as good as from bulblet grown corms.

It really seems strange that none of the older growers have so far undertaken to tell what happens when a Gladiolus corm gets to a stage where it will divide into several corms without throwing a flower spike, or more properly speaking what happens to the divisions in their future life history.

Unless indications fail there will be the finest display of bloom at the flower shows this year that we have ever seen. The Editor's experience is that *Pink Beauty* planted April 12th opened first bloom on July 18th. A correspondent from the state of Washington reports *America* and *Mrs. Francis King* planted 120 days and not in bloom. This indicates that when bloom does come, it will

be extraordinarily large and fine unless some unforeseen weather conditions interfere. Therefore, plan to visit the flower shows this year and see the finest display that has ever been shown.

One of our subscribers in California reports that under his cultural and climatic conditions that he has had Gladiolus blooms every month in the year and some of the best ones in the month of January. We poor Eskimos in the north think little about Gladiolus bloom in January, but we certainly would appreciate them just the same could we see them. This same subscriber says that he has raised three different sets of blooms from the same bulbs in one year. If we get one lot of bloom we are pretty well satisfied.

Exhibitors at the Gladiolus shows in August may expect keen competition this year providing the weather is satisfactory from now on. The growing season has been most favorable for the growth of strong and vigorous bloom.



Part of the small stock of E. M. Smith, East Hartford, Conn. Mr. Smith says his three girl friends to the left in the photograph assist him in caring for the baby Gladioli. Mr. Smith to the right in the picture. Mr. Smith reports his first *Pink Beauty*, which were planted on April 8th, in bloom on July 13th, and he also says that experts declared that the season would be two weeks' later than this. The Editor's results were almost identical with Mr. Smith's, planting April 12th and blooming on July 18th. A long time indeed for *Pink Beauty*.

WAYSIDE RAMBLINGS.

PLANTING TO BLOOMING RECORD 1916.

		PLANTED	1st BLOOMING	PLANTING TO BLOOMING	Days
(Pots)					
Lilywhite	Mar.	3	July 8	127	Days
Pride of Goshen	Mar.	3	July 1	123	"
White Lady	Feb.	12	June 5	114	"
Alice Carey	Feb.	12	June 15	125	"
Outdoors—					
Heavy Clay (Adobe.)					
Halley	Feb.	22	May 25	93	"
Chicago White	"	22	May 19	87	"
Panama	"	22	June 22	121	"
Mrs. F. Pendleton	"	22	June 29	129	"
Alice Carey	"	22	May 27	95	"
Baron J. Hulot	Mar.	18	June 5	79	"
Niagara	"	18	June 24	98	"
Baron J. Hulot	"	21	June 10	81	"
White Lady	"	26	June 26	92	"
America	"	28	June 17	81	"
Mrs. W. E. Fryer	Apr.	2	Aug. 2	122	"
Mrs. F. Pendleton	"	8	July 22	105	"
Peace	"	8	Aug. 4	119	"
War	"	9	July 15	97	"
Schwaben	"	9	" 13	95	"
Mrs. Francis King	"	9	" 12	94	"
White Lady	"	9	" 1	83	"
Baron J. Hulot	"	13	June 26	74	"
Lily Lehmann	"	13	July 8	86	"
Willy Wigman	"	13	" 20	98	"
Empress of India	"	22	" 8	77	"
Taconic	"	22	" 6	75	"
Halley	"	22	June 29	69	"

W. J. COLCLEUGH, (California.)

GROWING GLADIOLUS SEEDLINGS IN GREENHOUSE.

TO THE EDITOR:—

Lifted three large flats of greenhouse grown seedlings today (March 15) which were planted last November. They are beautiful little bulbs, fully ripe, about three thousand of them. Shall keep them rather dry and plant out of doors in May. Wish you could see them.

Have followed this plan three years with perfect results. I planted 200 bulb-lets of a rare variety last fall (which had laid in the ground all summer and failed to sprout) in a 6 in. pan in greenhouse, previously peeling them; and all grew averaging about one-half inch when they ripened a week ago.

H. E. MEADER.

A HYBRIDIZING SUGGESTION.

A great *Hybridizing "Secret."* "Stale pistil fertilized with fresh pollen will produce plants and flowers larger than normal." "Fresh pistil crossed with stale pollen will produce plants and flowers smaller than normal."

C. M. S.

TIME FROM BUDDING TO BLOOMING.

To the man who has gone daffy on Gladioli, every little item connected with their growth is a matter of interest. Several have given in these columns lists of the length of time from planting to the opening of the first bloom. Each of these lists has been read with interest, although beyond the fact that *Pink Beauty* is the very earliest bloomer, we have learned none too much positively from them.

After the precious globules are hidden away in the ground, how we watch to see the first points of green peeping out! Then when the leaves are full grown we are on the lookout for the appearance of the first flower-bud, day by day carefully squeezing the stalk with thumb and finger, up and down, to detect a swollen spot which shall slowly travel higher each day until the tip of a flower-bud can be actually seen pushing its way out between the two central leaves. Then how long it seems from the sight of that first tip of the green bud until the first flower opens. Do you know with any degree of certainty how long that time really is?

Last year I kept tab on a number of varieties, setting down the date of the first sight of the tip of the bud and the date when the first floret was open. I give here the list of varieties and for each variety the number of days between the two dates:

Baron Hulot	7	White King	8
Chicago White	7	America	9
Early Black	7	Empress of India	9
Giant White	7	Kunderdi Glory	9
Niagara	7	Panama	9
Velvet King	7	Red, White and Gold	9
Golden King	8	Schwaben	9
Golden Measure	8	Europa	10
Mary Pickford	8	Klondyke	11
Myrtle	8	May	11
Pendleton	8	Mrs. Francis King	11
Princes	8	Red Amarillas	11

The average of all is a little more than 8½.

There may be nothing very positive to be learned from this, notwithstanding the fact that the dates were recorded with great accuracy. The table would be of more value had all the varieties been planted on the same day. If one corm of *America* were planted in April and another in June, likely the time for the latter would be shorter than for the former. Whether planted early or late, the warmer the weather the shorter the time might be. It may be, too, that another time the different varieties may not agree to follow the schedule they did this time, varying at different times according to their fancy. But there's the list for what its worth.

C. C. MILLER.

LICE ON GLADIOLUS CORMS.

In your June issue I note an inquiry from "J. P. W." regarding "Lice on Gladiolus Corms." In 1916 I had very much the same experience. When I brought my bulbs forth last season for planting I found most all of them were inhabited to some degree with grey lice, and in most cases the bulbs were literally covered with them. I was at a loss to know just what to do, and having no time to lose I chose the following experiment:

Procured an enameled pail and with it about one-third full of water I added about a pint of kerosene oil. First I removed all the husks from the corms and then placed a good number in the pail so that all were covered. While I was removing husk from another lot I allowed the first lot to soak a few minutes, after which I found that most all of the lice had left the bulbs and were floating on top of the solution. I handled each corm separately and if I found any lice I easily removed them by swishing the bulbs through the solution with my fingers. After this operation I placed the bulbs on old window screens and set the screens on the grass in the sun to dry. The corms soon dried and were ready for planting. Would not have been necessary to dry them if I had intended planting all of them at one time, but as I had put 500 corms through this process I naturally did not plant all of them on the same day.

The treatment caused no harm to the bulbs I am sure even though I did not have the best of luck with my blooms, for you well know last season was a rather poor one for growing Gladioli.

Most of my bulbs are now planted and I did not find lice on a single bulb and every one was in the best of condition.

I never had trouble along this line before and I feel that some bulbs I bought very early last season must have been infected and thus spread through my entire collection.

E. E. VROOM.

LICE ON GLADIOLUS CORMS.

The writer can imagine "J. P. W.'s" feeling when he discovered corm after corm covered with those myriads of nasty grey lice. I had the same sensation a year ago when I discovered that about fifty corms, purchased from a so called responsible grower, were loaded to the gunwales with those pestiferous passengers. Now, I wanted the corms for which I had paid a good price, but I didn't want the livestock under any consideration. Fortunately I had a quantity of powdered

tobacco and into this I threw the corms, lice and all. Say! A sicker lot of bugs you never saw. I clearly remember all my sensations when as a boy I endeavored to learn the manly (?) art of tobacco chewing and the recollection of my first (and last) chew will always linger. I think those lice from their actions had all the symptoms I had, and I was fiendish enough to enjoy their misery. Then I planted the corms, sprinkled the powdered tobacco about them, covered them up and they grew finely. When they were harvested in the fall, I found the tobacco had been highly effective—not a louse on the job—and a nice plump lot of corms to carry over.

C. S.

ORIGIN OF VARIETIES.

I would like to see published information as to the origin and when named of the following varieties of Gladioli: *Alice Carey*, *Bouquet D'Or*, *Bernice*, *Baltimore*, *Claude Monnett*, *Egra Rust*, *Gil Blas*, *Lilac*, *Maize*, *Mrs. James Lancashire*, *Prophetesse* and *Rouge Torch*.

Would like to know further as to the best means to employ in harvesting stock grown from the corms first season.

RAY P. SELOVER.

HINTS ON EXHIBITING FLOWERS.

One of our subscribers asks for information about exhibiting at fairs and wants to know about preparation, shipping, staging, receptacles, etc., and especially as to the necessity of the exhibitor being present in person. If anyone can prepare for us an article along this line we are sure it will be helpful to many amateur growers who have not had experience.

FORDHOOK HYBRIDS.

I note in the June number which I received today that "C. M. S." speaks of the *Fordhook Hybrids*. I would say that these are offered by W. Atlee Burpee Co. in both seed and corms. With proper care they are supposed to bloom the first year from seed. In 1915 I secured some seed from Burpee's which I planted about May 10th. None bloomed for me the first year but I got about 100 small bulbs which I planted out on May 1st, 1916. They all bloomed and some were very fine, equal to many named varieties and in all colors except white. I consider them worth while and even the smallest bulbs of one-quarter inch and less bloomed and made fair spikes.

J. M. K.

Producing Healthy Gladiolus Corms.

BY JOHN LANE.

In reading all the back numbers of THE MODERN GLADIOLUS GROWER I find a lot has been written regarding disease in the Gladiolus, and apparently no one has been able to solve the problem of producing healthy corms.

The following method has been followed by myself with the best of results: First, procure the healthiest corms available, and at once remove all the outer covering or husk, then examine the corms carefully with a lens, and if any trace of disease is apparent at once discard any so affected. Plant those that are healthy in land that has never grown Gladioli before and carefully watch their behavior until lifting time; any that show signs of prematurely ripening should be destroyed, and only the corms that show perfect health and vigor should be used for propagation and these should be stored in the *driest* atmosphere available, not in a damp and dark cellar, and this applies to both the corm and cormels; the drier they are kept the better. We have had them lying out in our winter sun with a shade temperature of over 70° for three months with the best results.

The Gladiolus in its native home grows in the rainy season, ripens off in the dry, the corms lie in the dusty earth sometimes quite on the surface with the cormels actually sticking out of the soil and exposed to the almost tropical sun of Natal and Madagascar without injury. This should show us what they desire. Let them have as much sunlight and keep them as dry as possible and there will be less disease. We keep our cormels in calico bags on a verandah up near the galvanized iron roof, where the temperature often rises above 120°, and have never had any trouble about germination. When planting time comes we repeat the process of selecting the best only and again plant in new land.

With regard to the corms these are all peeled and the perfect ones only planted. Any one who has had experience with Gladioli must have noticed at lifting time disease spots on the outer covering of both corm and cormel, while beneath is perfectly healthy; the trouble is only on the surface. To plant with this diseased covering still on the corm or cormel seems to me the height of foolishness, and I am sure is largely responsible for the trouble I am writing about.

Another cause of disease is planting

and propagating from old corms. If the corm planted has rotted by lifting time, it is sure to affect the new one that has formed on top. The best thing to do in this case is to destroy the lot, better still, never plant old stuff.

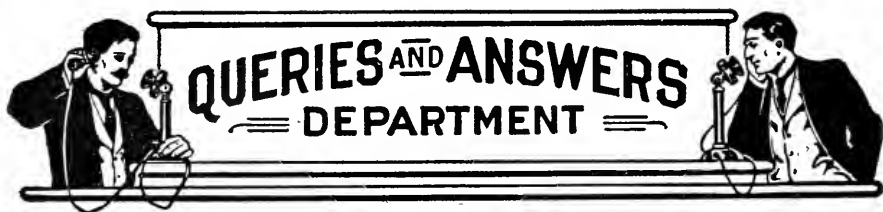
Any grower who follows this method, and by it produces healthy and reliable stock would, I am sure, reap a rich reward. Personally I would rather pay a dollar for one healthy corm than give the same sum for a hundred diseased ones.

To sum up, the main points are: To plant only peeled, healthy corms and cormels, always plant in new land, keep as dry as possible when out of the ground and ruthlessly destroy all that is undesirable. Nature always destroys before she rebuilds, and probably the greatest example of this law is in operation in Europe at the present time.

Lily of the Valley.

The plants of Lily of the Valley are perfectly hardy, and will grow well in either a shady or sunny situation. They do especially well in a rather deep, moist soil, but will thrive also in a sandy, rather dry loam. The plants may be obtained either in the fall or spring, and planted out where you wish them to grow. A single plant will soon stool out and become a clump, and one dozen pips set a foot apart in a bed, will quickly become a mass of plants that will bloom freely every season. In setting the pips allow the tip to be at the surface of the soil. The plants root freely, and are not readily troubled by drouth. About almost every home there are shady nooks where scarcely anything else will grow. In such places the Lily of the Valley can be planted advantageously, as the plants will make a bed of green throughout the season, and during the spring the racemes of fragrant, bell-shaped flowers will be freely produced. The bed should be reset once in three or four years, or as soon as they crowd each other to such an extent as to interfere with the development of the flowers.—*Park's Floral Magazine.*

Those who are strong on vegetable gardens and weak on floriculture are advised to devote a row across their garden to flowers. Gladioli are as easy to care for as potatoes and there are other flowers as well that command a consideration. A row of Gladioli in the garden will certainly behave better than in a stingy flower bed or border. Try this next year and see how it works out.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Late Planting of Gladiolus Corms in Greenhouse.

TO THE EDITOR:—

Is it practicable to keep Gladiolus corms in storage until August or September for an early winter or late fall crop? Suggestions will be appreciated.

R. T. G.

Answer:—Young corms of the forcing varieties of Gladioli which are of large size and carefully selected may be carried in cold storage at a temperature of 40 to 45°F. and planted in the green house in August or September. This would be keeping them dormant for ten months or so from the time they are taken out of the ground. There will be some deterioration and there would not be as high a percentage of bloom as from the same class of corms planted in the spring at the regular time.

Self Fertility of Gladioli.

TO THE EDITOR:—

Will a variety cross or fertilize itself? In other words, will the stigma of *America* receive pollen from another *America*?

L. H. R.

Answer:—Most varieties of Gladioli are self-fertile. By this term we mean that the pollen by coming in contact with the stigma in the same bloom or in another bloom of the same variety will fertilize the embryo so that seeds will be produced. I am inclined to believe that there are only a few exceptions to this general rule. This is why it is essential that the anthers which bear the pollen be removed from the flower before they become mature or ripe, when we are hand-pollinating to produce some desired cross.

Pollen from another variety is usually stronger or more prepotent for seed production than that from the same variety. Fruit growers take advantage of this fact by interspersing varieties in their plantings.

There are a few varieties from which I have been unable to obtain seeds. I consider these varieties sterile. Many of the best varieties are sterile or nearly

so because they have been bred up and away from the original or natural form. The poorest varieties or seedlings are the ones that usually produce an abundance of seeds.

A few years ago we had a pure white seedling of such an unusual shape that it could hardly be recognized as a Gladiolus, but it was so constitutionally weak that it only survived a few years and never even produced a bulblet.

G. D. BLACK.

Cold Storage of Gladiolus Corms.

TO THE EDITOR:—

Can I put corms of *Mrs. Francis King* and *America* in cold storage at 35 F. in the spring and hold until about August 1st and then plant for early winter bloom? I have tried inferior varieties and secured some flowers. Do you think that the varieties mentioned above will give results if handled as stated?

M. K.

Answer:—If the corms are young, strong corms of first or second size there is no reason why you cannot get satisfactory results by handling them as you have suggested. Would recommend, however, that a temperature of 40°F. would give better results with less liability of destroying the vitality of the corms. We tried this ourselves here, storing at 32°F. and decided that this temperature is too low for successful results. Would recommend that you do not experiment with too large a quantity of corms to start with. Try it on a small scale first.

Transplanting a Rose Bush.

I have a crimson rambler rosebush seven years old which I would like to transplant because it is in an undesirable location. How can this be successfully accomplished?

R. M. S.

Answer:—This is not a difficult task. Select the spot where the rosebush is to be replanted and excavate to a depth of two feet. Fill in with light rich soil composed mostly of well decayed stable manure with some small bones or pieces of crushed large bone. With care lift the rosebush and plant the roots well down in the prepared spot, using care to

press the roots rather firmly without cramping or bruising them. Plant the bush an inch or two deeper in the new location than it was originally. Water abundantly for a few days, keep all weeds from growing near the bush and no further difficulty will be realized.—*Successful Farming*.

Origin of Gladiolus

Julia M. Fairbanks.

TO THE EDITOR:—

Will you please tell me who originated the variety *Julia M. Fairbanks*? R. S.

Answer:—This is one of the varieties recently introduced which was originated by A. E. Kunderd, Goshen, Ind.

Gladiolus Byzantinus.

This fine old species has been planted in large groups amongst dwarf Heaths, and the effect of the mass now in bloom is very brilliant when the sun is shining on them. The flowers are vivid rosy-purple, a color which does not easily harmonize with other things, and, therefore, care should be exercised in planting. It is a good form for naturalizing in Grass and in warm, sunny places.—*Gardening Illustrated*.

Irrigation.

An irrigating system is a fine thing in a dry time—there is no doubt about that—but there is also no doubt but what those who have irrigating systems for growing Gladioli are quite likely to overdo a good thing. Where water is always on tap and it is only a question of starting up the pump to irrigate, few men, indeed, have been enough judgment to know just where to stop. The best rule is to irrigate heavily at less frequent intervals, but between times there should be plenty of chance for the air to get into the soil and it should not be kept in a wet and soggy condition.

Summer Hyacinths.

Mrs. E. W. Gould in her department, "Garden Helps" in the *Minnesota Horticulturist* speaks of summer hyacinths as follows:

I grew the summer hyacinth (*Galanthus*) this year. It is a bulb which is planted in the spring and can be used to fill out vacant spaces or as the center of a round bed to give height. It lasts quite well, having a period of bloom of about two

months. It looks very much like a yucca when in bloom.

The summer hyacinth referred to above can easily be raised from seed. I treated them as any seed, sowing them in the open in early spring. They were dug and stored like the bulbs of little Gladioli, being planted out again the next spring. This year, the third year, they have bloomed as well as, if not better than, any I have ever raised from the bulbs. They are quite well worth while and should be grown more largely, their tall spikes of white bloom filling well the place of foxgloves, which are so hard to winter.

The 1917 Gladiolus Shows.

We understand that the Preliminary Schedule of the American Gladiolus Society's annual flower show as published in our April issue with one or two exceptions stands without change and, therefore, the list of prizes will not be reprinted. Those who are interested will do well to look up the issue above referred to.

The prize list of the Gladiolus Society of Ohio was not ready up to the time of going to press so we are unable to publish their schedule of prizes. Those who are interested will do well to write W. A. Christy, Secretary, Warren, Ohio.

With the hot weather recently experienced there is no reason why growers should not have a plentiful supply of bloom at the time of the shows.

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New Iris**

I HAVE tested about every variety I could procure in the U. S., besides importing forty varieties from England, and my collection consisted of over 550 varieties before I began to raise seedlings. I found so many of the named varieties of no special merit that I made the attempt to improve them, and have succeeded far beyond my expectations.

☛ Fryer's Glory is one of the best of my new seedlings, and this is a new strain of Iris for all the red and near red that I have ever seen are of this strain. The plants are all very robust growers, and the flower stalks are much larger than most other varieties. They will average from 20 to 28 inches in height, and all have large flowers. In fact some of them have the largest flowers that I have ever seen on an Iris. The plants can easily be distinguished at a glance even by one not familiar with Iris. If the plant is good as well as the flowers, it is a double improvement.

*Send for new list with names
and descriptions.*

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From Canada—The bulbs you sent me last season were such fine bloomers that I am getting in a late order for more. Your Golden King was especially fine.

From Pennsylvania—I wish to thank you for your liberal treatment.

From Michigan—I want you to know how much I appreciate your kindness in sending those two additional lots without charge.

From Illinois—I will say, to deal with such men as you, business is a pleasure.

The above kind words are extracts from letters and cards recently received. We certainly appreciate the many words of satisfaction from our customers, realizing that a satisfied customer is the best advertisement.

Send for our retail list describing nearly 200 of the better old and new varieties. All of our own growing at fair prices. Wholesale list for dealers and large growers.

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Published Monthly by Madison Cooper, Calcium, New York.

Vol. IV.

SEPTEMBER, 1917

No. 9

Amethyst has not been largely introduced to commerce and it has behaved poorly under some growing conditions. With the Editor, however, it has proved exceptionally useful this year, 1917.

As its name indicates, *Amethyst* is a blend of violet and amethyst and it has a yellowish spearhead on the lower petal.



It has a straight spike and the photograph was doubtless taken from a small spike as from large corms a long spike is readily obtainable.

The coloring is distinctive and it has a useful place in any garden.

GLADIOLUS—AMETHYST.

Some call this *Early Amethyst*, but it cannot be classed as a real early variety.

The American Gladiolus Society.

Eighth Annual Exhibition of The American Gladiolus Society Held Under the Auspices of the New York Botanical Society, The Horticultural Society of New York, and Florists' Club of New York, in the Museum Building, Botanical Gardens, Bronx Park, New York City, N. Y., August 23, 24, 25 and 26, 1917.

THE New York Show of the American Gladiolus Society this year, which was the eighth annual exhibition, cannot be commented upon as being equal to shows which have been held by the society in the past, but at the same time there were some outstanding features of the show which made it equally as interesting as any preceding one. There were various reasons why the show this year was not so well attended and why it did not bring out as many entries as formerly. War conditions are partly responsible for the latter and the comparatively undesirable situation of Bronx Park for a flower show was another important reason. This park is not only far from the center of the city, but it is not easy of access and the attendance of the trade was, therefore, limited largely to those who were Gladiolus specialists. The show, however, was a large one and a conservative estimate on the number of spikes staged would place it at 10,000 to 12,000.

Two floors of the big museum building were occupied and plenty of space was available for proper staging and under the careful supervision of Secretary Nash, of the Botanical Gardens, the building was kept in neat condition and the flowers arranged for artistic effect after the exhibitors had their staging completed.

The feature of the show was the prize-winning group in Class 1. This was staged by B. Hammond Tracy, Cedar Acres, Wenham, Mass., and covered over 200 square feet of floor surface. In the center of the circular group was a large palm, around which were arranged the vases and baskets containing the artistic display showing the handiwork of Mrs. Tracy. *Rouge Torch* and *Prince of Wales* were prominent among the varieties staged in this group. *Violet Perfection*, *Lily Lehmann* and *Loveliness* were also noticeable.

The display of John Lewis Childs, Inc., Flowerfield, L. I., N. Y., contained over 100 different varieties and as usual the excellence of the Childs type was notice-

able. The Childs exhibit attracted much attention during the show and the number of premiums won by the stock staged by Mr. Hendrickson is evidenced by the prize list which follows.

C. Zeestraten, Bemus Point, N. Y., won many prizes and showed a large number of the Holland varieties especially. He showed among others, *Pink Perfection* and *Glory of Nordwijk*. *Coquette* and *Mahogany* were the new ones shown by Mr. Zeestraten. T. A. Havemeyer, Cedar Hill Nursery, Glen Head, N. Y., showed some beautiful bloom and a vase of *Golden Measure* and a vase of *Panama* were especially noticeable. He also showed 25 spikes of *Europa* with which he won first in the white class. The twenty-five spikes of *Golden Measure* made a very striking effect.

The seedlings shown by John Scheepers & Co., Inc., were of pronounced merit. Two certificates of merit were awarded them, one for a collection of colored seedlings and one for a collection of white seedlings.

The *Primulinus Hybrids* shown by B. Hammond Tracy, Wenham, Mass., and Madison Cooper, Calcium, N. Y., were of many shades and were much admired.

The new ruffled variety *Miss Helen Franklin* shown by Thomas Cogger took first prize in the 25 spikes of ruffled class. This variety is one of A. E. Kunderd's.

The exhibit of Vaughan's Seed Stores, New York and Chicago, containing about sixty varieties, won a silver medal and, considering that these blooms were shipped from Chicago, they were in excellent condition and the enterprise of this firm in undertaking so difficult a task is to be greatly commended. *Hyde Park*, *Sphinx* and *Florence* were especially to be noted in this group.

William Sim, Cliftdale, Mass., was awarded a silver medal for his fine display of seedlings.

The variety *Myrtle* shown by H. E. Meader, Dover, N. H., was awarded

certificate of merit. *Myrtle* is doubtless already well known to our readers. It is of a fine May-flower pink, almost exactly like the trailing arbutus. A silver medal was awarded this variety at the Boston show last year and it took first prize in the pink section. This is another of Mr. Kunderd's new things.

Mills & Co., Mamaroneck, N. Y., had a display of two hundred varieties of Dahlias and Dahlia lovers were greatly interested in this exhibit.

Baer Bros., New Hyde Park, L. I., N. Y., made a special display of their variety, *Crystal White* which attracted much attention.

In the non-commercial classes there were but three exhibitors, P. W. Popp, Gardener for Mrs. H. Darlington, Mamaroneck, N. Y., Madison Cooper, Calcium, N. Y., and J. P. Sorensen, Gardener for Wm. Shillaber, Essex Falls, N. J. The number of amateurs competing at the annual flower show is certainly diminishing and it is hoped to secure a list of prizes and an adjustment of the classifications for next year's show which will not only draw out a much larger number of amateurs but give them a reasonable chance to win prizes. The prize list heretofore has been such as to favor the large grower and the large grower should not be allowed to compete with the small grower.

However, the stock staged by the three exhibitors in the non-professional classes was most excellent and Mr. Popp is especially to be commended for his enterprise in entering many classes. He secured fifteen first prizes which gave him *The Garden Magazine* Achievement Medal and he richly deserves it. We are too modest to say much about the editor's stock but the twelve spikes staged singly in class 75 were worthy of mention and were in practically perfect condition on the second day of the show.

SCHEDULE OF PRIZES.

OPEN TO ALL.

Prizes offered by the New York Botanical Garden, The Horticultural Society of New York and The Florists' Club of New York.

	1st	2nd	
No. 1—	\$50	\$25—	For the most artistic display covering not less than 250 sq. feet, any decorative material may be used. First won by Cedar Acres, Wenhams, Mass.
No. 2—	40	20—	Best and largest collection of named varieties, 6 spikes of each variety. First won by John Lewis Childs, Flowerfield, L. I., N. Y.

	1st	2nd	
No. 3—	20	10—	Fifteen Vases, 15 varieties, 12 spikes of each. First won by John Lewis Childs, Flowerfield, L. I., N. Y.
No. 4—	20	10	Ten Vases, 10 varieties, <i>Primulinus Hybrids</i> , 12 spikes of each. (No entries.)
No. 5—	15	10—	Twenty-five Vases, 25 varieties, 3 spikes of each. First won by C. Zeestraten, Bemus Point, N. Y. Second won by Thos. Cogger, Melrose, Mass.
No. 6—	10	5—	Twenty-five spikes artistically arranged, receptacle to be furnished by the exhibitor. First won by Thomas Cogger, Melrose, Mass., with variety <i>Miss Helen Franklin</i> .
No. 7—	10	5—	Vase 25 spikes, White, one variety. First won by Cedar Hill Nursery, Glen Head, N. Y., with variety <i>Europa</i> . Second won by C. Zeestraten, Bemus Point, N. Y., with variety <i>L'Immaculee</i> .
No. 8—	10	5—	Vase 25 spikes, Red, one variety. First won by C. Zeestraten, Bemus Point, N. Y., with variety <i>Chataiqua</i> . Second won by Thos. Cogger, Melrose, Mass., with variety <i>Liebsfeuer</i> .
No. 9—	10	5—	Vase 25 spikes, Crimson, one variety. First won by John Lewis Childs, Inc., Flowerfield, L. I., N. Y., with variety <i>Negorfeurst</i> .
No. 10	10	5—	Vase 25 spikes, Pink, one variety. First won by Cedar Hill Nursery, Glen Head, N. Y., with variety <i>Panama</i> . Second won by H. E. Meader, Dover, N. H., with variety <i>Panama</i> .
No. 11—	10	5—	Vase 25 spikes, Yellow, one variety. First won by Cedar Hill Nursery, Glen Head, N. Y., with variety <i>Golden Measure</i> . Second won by John Lewis Childs, Inc., Flowerfield, L. I., N. Y., with variety <i>Sulphur King</i> .
No. 12—	10	5—	Vase 25 spikes, Blue or Lavender, one variety. First won by John Lewis Childs, Inc., Flowerfield, L. I., N. Y., with variety <i>Mary Fennell</i> ; 2nd won by C. Zeestraten, Bemus Point, N. Y., with variety <i>Dick</i> .
No. 13—	10	5—	Vase 25 spikes, Purple, one variety. First won by H. E. Meader, Dover, N. H., with variety <i>Baron J. Hulot</i> ; 2nd won by Cedar Acres, Wenhams, Mass., with variety <i>Violet Perfection</i> .
No. 14—	10	5—	Vase 25 spikes, any other color, one variety. First won by Cedar Hill Nursery, Glen Head, L. I., with variety <i>Peace</i> . Second won by C. Zeestraten, Bemus Point, N. Y., with variety <i>Mahogany</i> .
No. 15—	10	5—	Vase 25 spikes, Lemoinei Type, one variety. First won by John Lewis Childs, Inc., Flowerfield, L. I., N. Y., with <i>Willy Wigman</i> . Second won by Cedar Hill Nursery, Glen Head, L. I., with variety <i>Gen. Langlois</i> .

- | | 1st | 2nd | | 1st | 2nd | | |
|---|------|------|---|--------------------------------------|---|---|---|
| No. 16— | 10 | 5— | Vase 25 spikes, <i>Prinulinius Hybrids</i> , Yellow. First won by John Lewis Childs, Inc., Flowerfield, L. I., New York. Second won by Madison Cooper, Calcium, N. Y. | | | Mass. Second won by Riverbank Gardens, Saxonville, Mass. | |
| No. 17— | 10 | 5— | Vase 25 spikes, <i>Prinulinius Hybrids</i> , Orange. First won by Cedar Acres, Wenham, Mass. Second won by Madison Cooper, Calcium, N. Y. | No. 29— | 3 | 2— | Vase 6 spikes, any one variety not in commerce. First won by John Scheepers & Co., Inc., New York, N. Y., with variety <i>Mrs. John Turnbull</i> . Second won by Cedar Acres, Wenham, Mass. |
| No. 18— | 10 | 5— | Vase 25 spikes, <i>Prinulinius Hybrids</i> , any other color. First won by Madison Cooper, Calcium, N. Y. Second won by Cedar Acres, Wenham, Mass. | Prize offered by T. A. Havemeyer. | | | |
| No. 19— | 10 | 5— | Vase 25 spikes, Ruffled, one variety. First won by Thos. Cogger, Melrose, Mass. with variety <i>Miss Helen Franklin</i> . Second won by John Lewis Childs, Inc., Flowerfield, L. I., N. Y., with <i>White Glory</i> . | | | 1st 2nd | |
| No. 20— | 10 | 5— | Vase 25 spikes, any variety not in commerce previous to 1917. First won by Cedar Acres, Wenham, Mass., with variety <i>Sausel</i> . Second won by Riverbank Gardens, Saxonville, Mass., with <i>Beacon</i> . | No. 30— | \$10 | \$5— | Best collection of Montbretias. (No entries.) |
| No. 21— | 10 | 5— | Five vases, 5 varieties, 12 spikes of each. First won by Thomas Cogger, Melrose, Mass. Second won by John Lewis Childs, Inc., Flowerfield, L. I., N. Y. | H. E. Meader, Dover, N.H. | | | |
| No. 22— | 10 | 5— | Five vases, 5 varieties, 12 spikes of each predominating color of bloom White. First won by John Lewis Childs, Inc., Flowerfield, L. I., N. Y. | No. 31— | Cut glass vase, value \$5, best new Yellow <i>Prinulinius Hybrid</i> seedling, purity of color and size to count. Not less than 5 spikes. First won by John Scheepers & Co., Inc., New York, N. Y. | | |
| No. 23— | 10 | 5— | Five vases, 5 varieties, 12 spikes of each, predominating color of bloom Pink. First won by Cedar Hill Nursery, Glen Head, N. Y. Second won by John Lewis Childs, Inc., Flowerfield, L. I., N. Y. | W. E. Fryer, Mantorville, Minn. | | | |
| No. 24— | 10 | 5— | Five vases, 5 varieties, 12 spikes of each, predominating color of bloom Red or Crimson. First won by John Lewis Childs, Inc., Flowerfield, L. I., N. Y. | No. 32— | Twenty-five bulbs of <i>Mrs. W. E. Fryer</i> for best 12 spikes of that variety. First won by Jno. Scheepers & Co., Inc., New York, N.Y. | | |
| No. 25— | 10 | 5— | Five vases, 5 varieties, 12 spikes of each, predominating color of bloom, Purple, Blue, Lavender or Mauve. First won by John Lewis Childs, Inc., Flowerfield, L. I., N. Y. | Hitchings & Co., Elizabeth, N. J. | | | |
| Prizes offered by Charles F. Fairbanks. | | | | No. 33— | A silver cup, value \$10, for the most artistically arranged basket or hamper of blooms; not more than 25 spikes. First won by P. W. Popp, Mamaroneck, N. Y. | | |
| | 1st | 2nd | | Austin-Coleman Co., Wayland, Ohio. | | | |
| No. 26— | \$10 | \$5— | Five vases, 5 varieties, 12 spikes of each, predominating color of bloom Yellow. First won by John Lewis Childs, Inc., Flowerfield, L. I., N. Y. Second won by Cedar Hill Nursery, Glen Head, N. Y. | No. 34— | Silver Cup— | Best Yellow seedling, never before exhibited, one or more spikes. First won by Cedar Hill Nursery, Glen Head, N. Y. | |
| No. 27— | 20 | 10— | Best new seedling, one spike. First won by John Scheepers & Co., Inc., New York, N.Y. Second won by Cedar Hill Nursery, Glen Head, N. Y. | Munsell & Harvey, Ashtabula, Ohio. | | | |
| No. 28— | 5 | 3— | Vase 12 spikes, any one variety not in commerce. First won by Cedar Acres, Wenham. | No. 35— | First prize, 30 bulbs; second prize, 20 bulbs of <i>Hazel Harvey</i> , for best vase any Red variety not less than 10 spikes. First won by E. M. Smith, East Hartford, Conn., with variety <i>Mrs. Watt</i> . | | |
| | | | | C. Betscher, Dover, Ohio. | | | |
| | | | | No. 36— | First prize, \$5; second prize, \$3, for best 25 spikes <i>Prinulinius Hybrids</i> , not less than 4 inch blossoms. First won by Cedar Acres, Wenham, Mass. | | |
| | | | | No. 37— | First prize \$10; second prize, \$7.50, for best 25 spikes <i>Crimson Glow</i> . First won by Cedar Acres, Wenham, Mass. | | |
| | | | | No. 38— | One New Peony, <i>E. B. Browning</i> , value \$25, best vase 10 spikes <i>Crimson Glow</i> . First won by Cedar Acres, Wenham, Mass. | | |
| | | | | No. 39— | One New Peony, <i>F. E. Willard</i> , value \$15, best vase 6 spikes <i>Crimson Glow</i> . (No entries.) | | |
| | | | | No. 40— | One New Peony, <i>Chestine Gowdy</i> , value \$5, best vase 3 spikes <i>Crimson Glow</i> . First won by Cedar Acres, Wenham, Mass. | | |
| | | | | No. 41— | One New Peony, <i>Chestine Gowdy</i> , value \$5, best 10 spikes <i>Europa</i> . First won by John Lewis Childs, Inc., Flowerfield, L. I., N.Y. | | |
| | | | | No. 42— | One New Peony, <i>M. M. Cohusaac</i> , best 10 spikes <i>Negerfurst</i> . First won by John Lewis Childs, Inc., Flowerfield, L. I., N. Y. | | |
| | | | | G. D. Black, Albert Lea, Minn. | | | |
| | | | | No. 43— | First prize, 60 bulbs; second prize, 40 bulbs of <i>Golden King</i> , for best 12 spikes that variety. First won by John Lewis Childs, Inc., Flowerfield, L. I., N. Y. | | |
| | | | | Clark W. Brown & Son, Ashland, Mass. | | | |
| | | | | No. 44— | First prize, \$3; second prize, \$2, best vase, Mauve, Lilac or Violet seedling, never before shown. First won by Cedar Acres, Wenham, Mass. | | |

W. Atlee Burpee & Co., Philadelphia, Pa.

No. 45—\$10—Best collection 10 varieties, 6 spikes each. First won by Thomas Cogger, Melrose, Mass. Second won by John Lewis Childs, Inc., Flowerfield, L. I., N. Y.

A. E. Kunderd, Goshen, Ind.

No. 46—First, Gold Medal; 2nd, Silver Medal; 3rd, Bronze Medal. Best collection Kunderd's varieties; plain and ruffled. First won by H. E. Meader, Dover, N. H.

Earl Edgerton, Lansing, Mich.

No. 47—Bulbs to the value of \$5, winner's selection, for best vase 3 spikes *Lilywhite*. Won by H. E. Meader, Dover, N. H.

THE MODERN GLADIOLUS GROWER, Calcium, N. Y.

No. 48—To every exhibitor in the Open Class, not already a subscriber, a one year subscription to THE MODERN GLADIOLUS GROWER.

FOR NON-COMMERCIAL GROWERS.

Prizes offered by the New York Botanical Garden, The Horticultural Society of New York and The Florists' Club of New York.

No. 50—First, \$30; second, \$15—For the most artistic display covering not more than 150 sq. ft. any decorative material may be used. First won by P. W. Popp, Mamaroneck, N. Y.

No. 51—First, \$15; second, \$10—Best and largest display named varieties, 6 spikes of each. (No entries.)

No. 52—First, \$15; second, \$10—Best table decoration. (No entries.)

Prizes offered by Charles F. Fairbanks.

No. 53—First, \$5; second, \$3—Vase 12 spikes, White, one variety. First won by Madison Cooper, Calcium, N. Y., with variety *White Excelsior*.

No. 54—First, \$5; second, \$3—Vase 12 spikes, Pink, one variety. First won by P. W. Popp, Mamaroneck, N. Y., with variety *Mrs. Frank Pendleton*. Second won by Madison Cooper, Calcium, N. Y., with variety *Myrtle*.

No. 55—First, \$5; second, \$3—Vase 12 spikes, Red or Crimson, one variety. First won by P. W. Popp, Mamaroneck, N. Y., with variety *Mrs. Francis King*. Second won by J. P. Sorenson, Essex Falls, N. J., with variety *Mrs. Francis King*.

No. 56—First, \$5; second, \$3—Vase 12 spikes, Yellow, one variety. First won by Madison Cooper, Calcium, N. Y., with variety *Schwaben*. Second won by P. W. Popp, Mamaroneck, N. Y., with variety *Niagara*.

No. 57—First, \$5; second, \$3—Vase 12 spikes, Blue, Purple or Lavender, one variety. First won by Madison Cooper, Calcium, N. Y., with variety *Baron J. Hulot*.

Prizes offered by T. A. Havemeyer.

No. 58—First, \$5; second, \$3—Vase 12 spikes, any other color, one variety. First won by P. W. Popp, Mamaroneck, N. Y., with variety *Mrs. Watt*. Second won by Madison Cooper, Calcium, N. Y., with variety *Loveliness*.

No. 59—First, \$5; second, \$3—Vase 12 spikes, Lemoinei type, one variety. First won by P. W. Popp, Mamaroneck, N. Y., with variety *Golden King*.

No. 60—First, \$5; second, \$3—Vase 12 spikes, *Primulinus Hybrids*. First won by P. W. Popp, Mamaroneck, N. Y. Second won by Madison Cooper, Calcium, N. Y.

No. 61—First, \$5; second, \$3—Vase 12 spikes, Ruffled, one variety. (No entries.)

No. 62—First, \$3; second, \$2—Vase 6 spikes, White, one variety. First won by Madison Cooper, Calcium, N. Y., with variety *Mrs. L. Merton Gage*. Second won by P. W. Popp, Mamaroneck, N. Y., with variety *Albion*.

No. 63—First, \$3; second, \$2—Vase 6 spikes, Pink, one variety. First won by P. W. Popp, Mamaroneck, N. Y., with variety *Daisy Rand*. Second won by Madison Cooper, Calcium, N. Y., with variety *Panama*.

No. 64—First, \$3; second, \$2—Vase 6 spikes, Red or Crimson, one variety. First won by Madison Cooper, Calcium, N. Y., with variety *Czar Peter*. Second won by P. W. Popp, Mamaroneck, N. Y., with variety *Nezinscott*.

No. 65—First, \$3; second, \$2—Vase 6 spikes, Yellow, one variety. First won by P. W. Popp, Mamaroneck, N. Y., with variety *Schwaben*. Second won by Madison Cooper, Calcium, N. Y., with variety *ElCapitan*.

No. 66—First, \$3; second, \$2—Vase 6 spikes, Blue, Purple or Lavender, one variety. First won by P. W. Popp, Mamaroneck, N. Y., with variety *Baron J. Hulot*.

No. 67—First, \$3; second, \$2—Vase 6 spikes any other color, one variety. First won by Madison Cooper, Calcium, N. Y., with variety *Loveliness*. Second won by P. W. Popp, Mamaroneck, N. Y., with variety *Mrs. Watt*.

No. 68—First, \$3; second, \$2—Vase 6 spikes, Lemoinei Type, one variety. First won by Madison Cooper, Calcium, N. Y., with variety *Mrs. Frank Pendleton*. Second won by P. W. Popp, Mamaroneck, N. Y., with variety *Annie Wigman*.

No. 69—First, \$3; second, \$2—Vase 6 spikes, *Primulinus Hybrids*. First won by P. W. Popp, Mamaroneck, N. Y. Second won by Madison Cooper, Calcium, N. Y.

No. 70—First, \$3; second, \$2—Vase 6 spikes, Ruffled, one variety. First won by Madison Cooper, Calcium, N. Y., with variety *White Glory*. Second won by P. W. Popp, Mamaroneck, N. Y., with variety *No. 151*.

No. 71—First, \$5; second, \$3—Six vases, 6 varieties, 3 spikes of each. First won by P. W. Popp, Mamaroneck, N. Y. Second won by Madison Cooper, Calcium, N. Y.

No. 72—First, \$5; second, \$3—Best collection of Montbretias. (No entries.)

K. Velthuys, Hillegom, Holland.

No. 73—Most artistically arranged group—quality of flowers to count more than numbers. First, \$12; second, \$8. First won by P. W. Popp, Mamaroneck, N. Y., with *Primulinus Hybrids*.

L. Merton Gage, Natick, Mass. Sunny-side Gladiolus Gardens.

No. 74—For best 6 spikes of *Mrs. Frank Pendleton*—First, 50 bulbs of same variety; second, 30 bulbs; third, 20 bulbs. First won by Madison Cooper, Calcium, N. Y. Second won by P. W. Popp, Mamaroneck, N. Y.

Carter's Tested Seeds, 102 Chamber of Commerce Bldg., Boston, Mass.

No. 75—First, \$8; second, \$3—Best 10 named varieties, 1 spike each. First won by Madison Cooper, Calcium, N. Y. Second won by P. W. Popp, Mamaroneck, N. Y.

H. E. Meader, Dover, N. H.

No. 76—12 bulbs Gladiolus *Myrtle*, for best vase 5 spikes *America*. (No entries.)

Raymond W. Swett, Saxonville, Mass.

No. 77—First, Bulbs to the value of \$5; second, Bulbs to the value of \$3; third, Bulbs to the value of \$2—For best 3 spikes named varieties

in one vase. First won by Madison Cooper, Calcium, N. Y.

Willis E. Fryer, Mantorville, Minn.

No. 78—Twenty-five bulbs of *Mrs. W. E. Fryer*, for 12 best spikes of that variety. (No entries.)

Michells Seedhouse, 518 Market Street, Philadelphia, Pa.

No. 79—First, Silver Medal; second, Bronze Medal, for best seedling never before exhibited, not less than 3 spikes. (No entries.)

Herman H. Baer, New Hyde Park, L. I., N. Y.

No. 80—85 in gold for best 12 spikes *Crystal White*. (No entries.)

Homer F. Chase, Wilton, N. H.

No. 81—85 for best 3 spikes *Mrs. Watt*. First won by P. W. Popp, Mamaroneck, N. Y.

Arthur Cowee, Berlin, N. Y.

No. 82—85 cash for best vase 25 spikes *Peacc*. First won by P. W. Popp, Mamaroneck, N. Y. No. 83—85 cash for best vase 6 spikes *Peachblow*. (No entries.)

No. 84—85 cash for best vase 6 spikes *Papileo Rose*. (No entries.)

No. 85—85 cash for best vase 6 spikes *Dawn*. (Gross.) (No entries.)

No. 86—\$10 cash for best vase 6 spikes *After-glow*. (No entries.)

No. 87—\$10 cash for best vase 6 spikes *La Luna*. (No entries.)

No. 88—\$10 cash for best vase 1 spike each of the varieties *War*, *Peacc* and *Prosperity*. (No entries.)

John Lewis Childs, Flowerfield, L. I., N. Y.

No. 89—First, \$10; second, \$5—Best and largest collection Childs' type, named. (No entries.)

B. Hammond Tracy, Cedar Acres, Wenham, Mass.

No. 90—85 in gold for best Pink Gladioli in the show. (No entries.)

American Gladiolus Society.

No. 91—First, Silver Medal; second, Bronze Medal—Best exhibit of at least 15 varieties, 3 spikes each, correctly named. Won by Madison Cooper, Calcium, N. Y., with 22 varieties.

A. E. Kunderd, Goshen, Ind.

No. 92—First, Gold Medal; 2nd, Silver Medal; 3rd, Bronze Medal—For best exhibit Kunderd's *Primulinus Hybrids*, open to those who have never exhibited before the A. G. S. First won by P. W. Popp, Mamaroneck, N. Y.

THE MODERN GLADIOLUS GROWER, Calcium, N. Y.

No. 93—For the best display of Gladioli consisting of not less than ten spikes nor more than twenty spikes. Not more than three spikes of any one variety. No preference to be given to named varieties. First prize, A Life Subscription to THE MODERN GLADIOLUS GROWER; second prize, a five year subscription to THE MODERN GLADIOLUS GROWER; third prize, a two year subscription to THE MODERN GLADIOLUS GROWER. First won by P. W. Popp, Mamaroneck, N. Y.

The Garden Magazine, Garden City, N. Y.

No. 94—The Garden Magazine Achievement Medal to the winner of the most first prizes in non-Professional Class, 3 or more competitors. Won by P. W. Popp, Mamaroneck, N. Y., with fifteen first prizes.

Pæonies.

September is a good month for handling Pæonies. Perhaps in some localities the tops will be quite green and the plants hardly ripe enough to dig, but each nurseryman will have to decide this for himself. If they are handled before they are ripe, there will be great danger of shriveling if the weather is very dry and they are subjected to very much exposure, but the nurseryman cannot always do work just when he would like to, and if there is any transplanting to be done the sooner it is attended to and out of the way the better, as the fall shipping season will soon be here.

There is no plant that pays better for deep cultivation and thorough preparation of the ground than the Pæony. It is a deep rooting plant and a voracious feeder, and much of the trouble known as coming blind is caused by poor condition of soil and too close propagation, weakening the plants.

The Pæony is undoubtedly a coming flower, and when there is the same care and attention given to raising stock for Pæonies and in the selection of variety as there is in the roses, carnations and other lines of plants we shall have very different results from what are being generally produced now. Just because the Pæony is a plant that will often thrive with very little attention and produce fair results, is no reason why it should be neglected, in fact the reverse is true, there is no plant that responds quicker to cultivation and intelligent treatment.—*National Nurseryman*.

THE MODERN GLADIOLUS GROWER undertook an experiment this year during the blooming season which has proved a great success and which will doubtless have great educational value and it is hoped to extend the plan next year. Boxes of cut Gladiolus bloom about 25 to 30 spikes, have been sent out within certain postal zone limits in connection with new subscriptions or renewal subscriptions, and we believe that it will be possible for us to extend the zone limit next year and give more of our subscribers the opportunity.

The securing of a suitable package for shipping was one of the chief factors in the success of the experiment. Special Parcel Post flower boxes were secured and these have proven remarkably satisfactory as a protection to the bloom. As a matter of fact we have not had a single complaint of arrival of bloom in poor condition.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
PUBLISHED MONTHLY ON THE FIRST OF THE MONTH BY
MADISON COOPER, CALCIUM, N.Y.

Subscription Price:
75c. per year,
3 years for \$1.50.

OUR MOTTO:
Special favors to none, and a square deal to all.

Canadian and Foreign
Subscription Price
\$1.00 per year

Growers are invited to contribute articles or notes over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.

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Vol. IV.

September, 1917

No. 9

*Gla-di'-o-lus is the singular of Gla-di'-o-li.
Correctly pronounced with accent on the syllable "di."*

"Not True to Name."

Those who have occasion to purchase nursery stock, bulbs, seeds and things to grow generally, know what it means to be disappointed in the results of their purchase, and the question of getting stock true to name is a very serious one and probably always will be.

This year, the editor's experience and the reports coming to him, indicate that there has been a great deal of trouble from mixture of varieties or wrong labeling. It is possible that this is owing to scarcity of help and the employing of incompetent help in the caring for and grading of stock.

Cases have been reported which indicate that some growers have sent out stock which was wrongly labelled. Whether from carelessness, ignorance or some other cause, this is difficult to determine but it would seem that reports this year indicate an unusual prevalence of getting stock untrue to name and that some growers may have been guilty of substitution. However, we want to caution purchasers that they should be sure before condemning a grower. Sometimes stock which is mixed with the true variety will bloom before the true variety blooms.

This would lead the purchaser to believe that all the stock was of the kind which bloomed first. Purchasers should not report on stock until practically all of it has bloomed.

In event of trouble of this kind, a full report should be made to the party from which the stock was purchased. Most growers do not sell all their stock, and can check any error if such has been made, and actual errors are always made good by reliable growers.

Another caution to purchasers is care in handling stock after received. Cases have been known where the purchaser got the labels mixed himself and then blamed the grower. Do not be too anxious to blame the grower. There are probably dishonest growers, but surely they are not numerous and the editor has yet to find a case where substitution with deliberate intent has actually been practiced.

MADISON COOPER.

It is pointed out by one of our subscribers in California that Eastern growers who fill orders for shipment to California, should, when so ordered, get the stock out in the fall of the year. This subscriber reports that stock ordered for shipment December 1st was not sent until January

and then arrived in a frozen condition. We beg to suggest to commercial growers that they cater to fall orders. Good stock delivered into the hands of the purchaser in the fall puts the responsibility of storage on the purchaser and besides the purchaser has the advantage of knowing what stock he will have for the spring. Late spring shipments are a poor thing from both the standpoint of the seller and the buyer.

Gladiolus growers who purchase planting stock for the first time are sometimes disappointed at the size of it. Planting sizes, for instance, ranging from $\frac{1}{4}$ " to $\frac{1}{2}$ ", look rather big on paper, but the actual corms look rather small. These young chaps, however, if well grown have great vitality and increase to large size corms the first year. The purchase of planting stock is the cheapest way to increase a person's plantings largely unless indeed one wants to purchase bulblets and wait still another year for bloom.

One of our correspondents reports complete success in the planting of Gladiolus cormels with a layer of sand above and below, about $\frac{1}{4}$ " to $\frac{1}{2}$ " in thickness. He says that when digging, the ground parted at the layer of sand like a moulder's flask and that the roots seemed to have no trouble in reaching through the sand to the feeding soil below. This is a good suggestion for those who have a difficult hard clay soil, as the digging of cormels in the fall out of hard clay is not an easy task.

We have before suggested that Gladiolus growers should order their bulbs in the fall. It will save disappointment on spring orders and those who have good storage will find it decidedly to their advantage to order now. Besides, it is more than probable that prices will be higher in the spring. We, of course, will not guarantee that the prices will be lower this fall than next spring, but this is always the tendency of the market.

Late Gladioli.

The following is a copy of an article on Gladioli from *The Florists' Exchange of New York City* of June 23rd:

"If you can purchase some Gladiolus bulbs reasonably at this time (the article is addressed to florists in general) get them and plant out for late crop. From June 18 to 25 is not too late to plant bulbs and get good results. Bear in mind that Gladioli love moisture but don't want wet feet. We had a batch on a sloping piece of land last year; on the upper end the plants produced excellent spikes of flowers, while on the lower part, with poor drainage, they proved to be a failure. Plant the bulbs fully five inches deep and keep the soil around the plants cultivated. The late planted bulbs should receive more attention than the early ones. If the plants have to struggle along in heavy soil with a hard crust on top, and suffer for the want of moisture, you won't get the money back that the bulbs cost you."

Commenting on the above I would like to say that it seems to me that in any low place in a field, as mentioned in the above article, (and in looking over several large farms of Gladioli I have observed such low places) if the grower would be careful to hill up the plants somewhat higher in such low places, making the trenches between the ridges a little extra deep so that the water would always drain off and away from the bottom of the bulb, he ought, from the extra amount of moisture available in such spots, get Gladioli equal if not superior to those in the other parts of the field. I am led to make this statement from the fact that in the fields I saw there was no effort seemingly made to make the ridges higher in such low places but almost exactly the same culture was given as in the rest of the field. I also noted, as the writer of the above article states, that in the low places in the fields I saw the Gladioli seemed to be worthless and practically a total loss.

B. F. STALNAKER.

There are certainly many new things to be found out about growing Gladioli every year and weather conditions during 1917 season were most unusual. We predicted early in the season that the quality of bloom at the New York Flower Show would be fine. Although there was some fine bloom exhibited, yet the average was far from fine. Variable weather conditions keep a person who is interested in growing any kind of a crop guessing on the future, and surely if weather conditions are carefully watched, much information may be gleaned after years of experience. The hot, dry spell in July and August this year following the rather cold although not extremely wet spell early in the season was very disastrous to many classes of vegetation.

WAYSIDE RAMBLINGS.

FROST DAMAGE.

During the past winter, as is well known, the frost was very severe in England, and on more than one night I registered over 20° of frost. Owing to want of labor, quantities of Gladioli had to be left in the ground. According to all accepted teaching they should have been killed. On the contrary, they are, if anything, better looking than those that were lifted and replanted this Spring. They include *Pink Beauty* (in bloom today, 8th July), *Halley, America* and *May*. I also had one or two pots of *America* which had been left out in the open. On shaking these out I found the mother bulbs rotten, but the bulblets apparently sound. I replanted some of these in a pot and quite 90% of them are growing. In another spot in the garden, where some Childsi have been growing for years, the ground being wanted for other things, the bulbs were dug up, but quantities of bulblets have, notwithstanding, made their appearance. The early Gladioli had, however, made too much growth and were cut down by the frost. These also suffered in the same way in 1912, but did not die. G. C.

TIME FOR PLANTING AND DIGGING GLADIOLI.

There is considerable discussion as to the proper time to plant and dig the Gladiolus, and to the amateur or beginner, it may seem a rather difficult matter to know just when to do this.

If one would use good sound judgment, and not rely too much upon the advice and ideas of others, perhaps hundreds of miles away, where the climatic conditions may be entirely different, they should be able to judge the time for this work about right.

The following rules for planting and harvesting should apply in any locality. Plant the bulblets first, as early as the ground can be worked properly. Plant about the same time as you would for Sweet Peas. Soaking the bulblets for two or three days before planting will assist germination. Next plant the small corms, three-eighths to three-quarters inches, as soon as the ground commences to warm up. Digging the trenches and leaving them exposed to the sun for several days will materially assist in warming the ground to a considerable depth. Next should follow all larger corms. The latter will bloom first and the smaller ones later, excepting in a few varieties.

Harvesting the young stock grown from bulblets may be started when the leaves begin to fall, and will be much easier to handle than if left in the ground until the young leaves begin to dry up and break off. Earlier digging of this stock does no harm, simply stops the growth. The second year corms and all larger stock will be benefited if left in the ground as late as possible, but not so long that the tops become too dry and break off easily. One should judge the time to do this by the size of the crop to be harvested and not be caught napping when snow and freezing weather set in. In some localities October is the month for this work, while in some parts of the country the time may extend into November, thus the advisability of judging these things for oneself.

A great deal may be learned from reading reliable articles on the care and culture of Gladioli, as published in THE MODERN GLADIOLUS GROWER, but one must use his own judgment to a certain extent, especially when it is a matter of climatic conditions. T. H. FULLER.

ON STORING GLADIOLUS CORMS.

When I dug my bulbs last fall, I spread them out for two or three weeks, until they were thoroughly dry. Then I put them in the cellar. My mixture I placed in a large box. The named varieties I placed in paper boxes or envelopes, using in most cases the same ones in which the original bulbs had come to me. I had about twenty named varieties, and wished to keep them each separate, and also to keep them in the best possible condition for use in the spring. About February 1st I discovered that some of the bulbs were moldy, and investigation showed me that all those which had been stored in paper bags were rotten. My explanation is that the paper prevented evaporation, and the moist air of the cellar kept the bulbs damp. It may save someone else loss to know of this experience. The mixture in the open box is apparently all right. R. E. BOOMHOWER.

Note by the Editor—

A damp cellar is not a good place to store Gladiolus corms. Dampness may sometimes be obviated by careful ventilation. If there is a tendency to dampness it is of the utmost importance that the corms be spread out thinly, or what is better supported on wire bottomed trays. During storage it is well to examine the corms at frequent intervals to see in what condition they are keeping.

TITANIC.

One of our Iowa growers who has produced several fine Gladioli sent me samples last spring of a new Gladiolus which I planted late—along in June. Consequently I had the flowers to show at the Cedar Valley Exposition, where it attracted more attention than almost any other sort. I did not remember at the time where it came from, but the label was *Titanic*. Judging from this limited trial, it is remarkably fine and almost unique in color, belonging to the magenta-crimson class, with very large, wide open flowers and of strong, tall growth. It has never been disseminated and I do not know whether it is likely to be, but I am advised that it has been purchased by several amateur growers for trial or, perhaps, after trial. I would like to hear of the experience of any who have tried it.

GEO. S. WOODRUFF.

ORIGIN OF ILLUSTRATION ON COVER OF
KUNDERD'S CATALOGUE.

Was much interested in reading the article in my July number of THE MODERN GLADIOLUS GROWER from A. E. Kunderd in reply to your inquiry concerning the title page illustration of Kunderd's catalogue for 1917. Having sent for, and having just received a copy of the catalogue, I have studied the engraving from every angle, and have come to the conclusion that it is a combination of three if not four separate blooms, possibly arranged by some exhibitor for the novelty of it, with the spike at the top of the picture being inserted as a brace while the photo was being taken, and possibly as a "blind" to make it appear as an entire bloom. As you will observe there are the stamens or pistils of three blooms—the lower one, the one in the center, and one at the right, while the stamens of the top bloom are concealed by the one in the center. Am I right?

R. J. PATTERSON.

DIVIDING GLADIOLUS CORMS.

I have practised dividing Gladiolus corms more or less for more than twenty years. Sometimes dividing thousands, and often cutting only a few, mainly in an effort to more rapidly multiply new or scarce varieties, I have a few times cut a large corm into as many pieces as there were good prominent eyes, with a root germ attached. My conclusion is that as a rule it does not pay, as the growth of the division is not as strong usually as when the entire corm is planted. T.

DIVIDING GLADIOLUS CORMS.

In the May issue of THE MODERN GLADIOLUS GROWER, I note with interest an inquiry regarding the cutting of corms to hasten increase. Although I do not pose as an expert on this matter, it seemed that my experience might prove of interest. Last year and year before I cut several large corms in two, three and four pieces. The result was that the cut sprouts did not appear above ground for about two weeks after the other uncut ones planted at the same time. The spikes of bloom were small, the resulting corms were small, and there were no bulblets to speak of. It seems to me that the method is not very valuable. However, I am going to try it again this year. D.

PROMOTING INCREASE BY DIVIDING CORMS.

This year I cut some big bulbs into pieces, each with an "eye." Every one grew a good bulb and a few of them bloomed. They were kinds that produced few bulblets and I wanted to see if I could get good increase in this manner.

MINNIE E. MAIN.

Transplanting Peonies.

Peonies being such a universal favorite with all flower lovers, it is very important that we should understand a few of the vital points relative to their successful culture.

The proper time to plant, or lift and reset the Peony is in September or October. In southern latitude or when we have a fine late autumn, a little later will do, but on account of the plant having such heavy foliage, and bearing such immense flowers, it is necessary that there be a strong root growth in the autumn as the foliage and flowers tax the plant, and draw so heavily on the vitality in the spring.

The Peony loves a light sandy soil, and a well drained location, where there will be abundant sunshine.

Low, undrained, or sour soil will not produce Peonies to any degree of perfection.

If the earth is inclined to be a little wet, make a Peony bed by elevating the soil to at least eight inches above the surrounding ground; in doing this, use some sand, and there will be much better blooms the coming season.

Peonies that have remained for several years in one position ought to be lifted and reset. The improvement will be very noticeable.—J. T. T. in *Successful Farming*.

MRS. AUSTIN'S TALKS.

JUST HOLLYHOCKS.

"Get a lunch ready and let's go on a picnic trip." Something in the expression of his face made me wonder if I had lost my old time recipe for spiced marble cake, (a favorite of his) and if I had forgotten how to make banburies which are really little crescent shaped pies, the filling of which is a delicious mixture of lemons, raisins, etc.

While the chicken was frying and I tried my latest formula for summer frosting my thoughts wandered to pleasure trips of bygone years. There were more woods by the roadside then and better places for picnicing. There were so many birds too, the trees seemed full of them. The horse looking into the wood as he munched his feed of grain appeared to enjoy the outing as much as we. Dear old "Cap," with check rein unfastened and lines loose, he chose his own gait, a long swinging stride that carried us smoothly for many a mile. It was easy for him for wasn't he a magnificent Hambletonian and his ancestors leaders in Sherman's march to the sea? With a jolt I was back to the present for it had been *war*, and wasn't it *war* now, and even our own helpers drafted. Warbirds testing planes in aviation grounds, autos and noisy motorcycles rushing by and—O, dear, the chicken scorching!

At—miles an hour we quickly left our own county and as we slowed down saw what had seemed to be great splashes of color were just hollyhocks. It was almost a surprise to see such beauty. We had taken trips when June had given us a paradise of roses, but hollyhocks, just hollyhocks, had not appealed to us as anything to be compared with roses and yet never had we seen a more gorgeous display of color or the country look more beautiful. Perhaps the season had been exceptionally good for hollyhocks, or that people have been awakening to the value of them in landscape effect, perhaps we have been napping when hollyhocks bloomed, anyway the hollyhock has certainly come into its own. There were great clumps of the old fashioned singles and doubles screening barnyards, hiding unsightly fences, standing like sentinels by the kitchen doorway. They lighted up the shrubby row or formed a background for the smaller shrubs, perhaps a stately row the entire length of the garden. They were everywhere and their uses in-

numerable. A large planting of a wonderful pink variety proved to be the new *Newport Pink* an improvement over the older sorts, possessing longer spikes of bloom, and if planted inside in March will produce blooms the following July. Another beautiful strain is the *Allegheny* hollyhock which has semi-double flowers the petals of which resemble the sheerest silk. These may be had in the various colors of the older varieties.

The first thing we did upon our return home was to look for a place to plant hollyhocks and it did not take us long to find one. Although the weather was hot and dry and the soil of the place selected, quite hard, by working it over several times we succeeded in getting it fine and planted some good seedling plants. They were carefully shaded, kept well watered and are now strong thrifty growers which goes to show that the hollyhock will stand transplanting out of season and in rather poor soil.

It should have a rich well-drained soil such as Gladioli require. Any soil full of humus, sweetened with lime made light with leaf mold, will produce grand flowers in any *good* garden soil.

They may be propagated by dividing old roots or grown from seed. Seed planted in the garden at the time vegetable seeds are will make strong plants that will bloom the second year. If not wanted to bloom where the seed was planted they should be transplanted in the fall or early spring before growth commences. Old roots should be divided in the fall. There are very few perennials that will give greater returns in floral display for so little attention, but, of course, will give greater bloom from the best of soil and cultivation.

MRS. A. H. AUSTIN.

Don't forget that the proper sunning of Gladiolus corms after digging is of the utmost importance in connection with the safe keeping of the corms over winter. The so-called curing process which means the freeing of the corm of surplus moisture is only a part of the story. The stalk should be cut off close to the corm at digging time and the corms placed on trays not more than a couple of inches in depth and turned over each day and exposed to the sun-light. This has not only a drying but a strong purifying effect which will prevent disease and the rotting of corms in storage. Of course suitable storage is important, but anyone can look after the proper sunning in the field. From three to six days is necessary for best results depending on weather conditions.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Forcing Gladioli.

TO THE EDITOR:—

First, Is there any different method used to grow Gladiolus bulbs for forcing for blooms for Easter than ordinary field culture? Second, Are they planted extremely early? Please give as much information as you can. I sell thousands of bulbs, and have a demand for forcing bulbs, but know nothing about that end of the game.

F. O. G.

Answer:—So far as I know there is no difference in the method used in growing Gladiolus bulbs for forcing for Easter than that of ordinary field culture. They should be given the kind of culture and fertilizers which would make them thoroughly matured when they are dug, which means that they should be given frequent cultivation early in the season, and then allowed to have their foliage thoroughly matured before digging. It is, of course, advantageous to plant them as early as possible in order that they may complete their growth, mature, and then have a period of rest before they are planted indoors. Gladioli seem to bloom nicely after having been forced once. If the question is, "Will bulbs which have bloomed in the Summer bloom again when forced?" The answer is that they no doubt would.—A. C. H. in *Florists' Exchange*.

Proper Curing of Gladiolus Corms.

TO THE EDITOR:—

This year I received a lot of the cleanest and brightest planting stock that I ever received and if it isn't intruding into trade secrets would like to know how such beautiful stock is grown and cleaned. Are the bulbs washed, and if so, how and when?

L. S. N.

Answer:—Proper curing, which means exposure to sun and proper drying at digging time is, we believe, at least to an extent, the secret of eliminating Gladiolus corm disease and producing bright, clean corms. Corms dug during a wet time necessarily will be dirty and this is especially true if they are grown in a clay or heavy loam soil. Corms grown in sand necessarily will be much cleaner, every-thing else being equal, than corms grown

in any heavy soil. Ideal digging conditions when the soil is reasonably dry and the weather bright and sunny should result in clean, bright corms which may look as though they were actually washed with water after digging.

To properly cure corms in the field a shallow tray with a fine galvanized wire screen bottom may be used. These trays should be raised off the ground at least two inches for a circulation of air. At night or during a rainy time they should be piled up and covered with a waterproof canvas. Each morning the trays should be uncovered and spread out on the ground and the corms stirred and turned in the trays. If the weather is clear, three or four days of such treatment is ordinarily sufficient before putting them into the cellar, but if damp, humid weather is encountered a much longer period may be necessary.

Corms dug late in the fall, say about November 1st, are very difficult to cure as the days are short, and cloudy weather is likely to be encountered. There is also danger of freezing and it is often necessary to hurry the corms into the cellar soon after digging. It has been noticed that stock which was dug last is most subject to the various rots and scab diseases and we attribute this largely to insufficient sunning and curing.

California Grown

Gladioli in Indiana.

TO THE EDITOR:—

Would you expect California grown Gladiolus corms and seed to do well in Indiana? C. F. G.

Answer:—We certainly would expect Gladiolus corms or seed grown in California to do well in Indiana. Gladiolus corms are sent from the East to the West and from the West to the East interchangeably and so far as we are aware, with the very best of results. We have no real information on the question of growing from seed, but see no reason why the results should not be entirely satisfactory.

American Gladiolus Society. Annual Meeting.

The annual meeting of the society was held in the Museum Building of the New York Botanical Gardens at Bronx Park, New York City, on August 24th at 2:30 P. M. In the absence of President Chas. F. Fairbanks, Vice President T. A. Havemeyer presided. Secretary Henry Youell, of Syracuse, N. Y., was absent owing to his having met with an accident shortly before the meeting. H. E. Meader, of Dover, N. H., was appointed secretary pro tem.

Dr. Britton of the New York Botanical Gardens welcomed the members of the society and stated that it was hoped that The Gardens would establish a Gladiolus garden similar to the Iris garden which was already established, and that a standard collection of Gladioli, which would be of educational value to visitors to the Botanical Gardens, might be built up by contributions from stock from prominent Gladiolus growers, in addition to what The Gardens was empowered to buy.

Secretary Youell's report was then read and filed.

Treasurer A. E. Kunderd filed his report and \$742.05 was reported in the bank with only a few small current bills outstanding.

The election of officers resulted as follows: President, A. E. Kunderd, Goshen, Ind.; Vice President, H. E. Meader, Dover, N. H.; Treasurer, Madison Cooper, Calcium, N. Y.; Secretary, Henry Youell, Syracuse, N. Y. Mr. Youell has been secretary since the society was organized.

Vice President Havemeyer referred to an arrangement between the society and THE MODERN GLADIOLUS GROWER which matter had been taken up at last year's meeting at Boston. Mr. Havemeyer stated that the matter had been acted upon favorably by the Executive Committee and so far as he knew was ready for closing. It was decided to refer it to the new Executive Committee to be appointed by President Kunderd.

Considerable discussion was had with reference to the desirability of obtaining new members and many suggestions were made by members present. The question of changing classification so as to encourage amateurs to exhibit at shows was also brought up and a vote wastaken and \$50 was provided to be used for publicity purposes to start the work of obtaining new members. Mr. Joseph Lane of the American Dahlia Society spoke on what that society had done in

the way of increasing its membership and it was suggested that the services of Mr. Lane be secured to co-operate with the new Executive Committee in the work of obtaining new members and promoting the flower shows. Mr. Lane agreed to undertake the work.

The annual discussion as to the status of the amateur grower was brought up and the editor of THE MODERN GLADIOLUS GROWER offered a number of suggestions as to changes in the classification so as to encourage the small amateur to exhibit at the annual shows. Many other helpful suggestions were made and the editor promised to do everything he could through the columns of his paper to help.

Prof. A. C. Beal, of the Nomenclature Committee of the society, spoke of the Gladiolus test garden at Ithaca, N. Y. He reported that nothing had been done during the past year for several reasons, but that his department was now in position to take up the work again. Prof. Beal in replying to a question stated that although a test of longer than a year would be desirable, yet many objected even to the one year test, feeling that registration should be given on application as is done by other societies; and further that the object of the test was to decide whether the variety in question differed enough from others to warrant registration rather than to determine actual merit and secure descriptions.

The location for the next show was discussed and the desirability of various cities for this purpose was talked over. Nothing was arrived at, but it seemed the sentiment of the meeting that President Kunderd should appoint an executive committee with one or more western members and that the next annual show should be held further west than any recent show. Mr. J. C. Vaughan, of Vaughan's Seed Stores, was present and offered some helpful suggestions about the shows in general and the holding of the next show in the West.

Although owing to circumstances comparatively few members were present, yet the meeting was one of much interest and there is no doubt but what an interesting future for the society is at hand.

One of our subscribers reports that he has considerable trouble with ants this year. He plowed up part of his land and made a garden of it and planted bulbs before the ants had begun to work. He wants some remedy for ants which will not damage the bulbs. If any of our readers can offer suggestions, will be glad to hear from them.

As suggested in another column, fall ordering of Gladiolus corms is the right thing providing you can order from a grower who will deliver the corms when you order them or somewhere near it. It is pretty safe to ship Gladiolus corms all winter by Parcel Post by guarding against cold snaps and even express on larger packages is quite safe. It is quite safe if a corrugated box is used and well lined with newspapers. Careful packing will do a great deal toward protecting against frost, but it seems that Parcel Post is much safer than express on the small packages.

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Published Monthly by Madison Cooper, Calcium, New York.

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GLADIOLUS—WHITE IVORY.

Originated by A. E. Kunderd, Goshen, Ind. Color, snow white with beautiful red blotches on lower petals and still more intensely ruffled than *Ivory*. It is also taller than *Ivory*, otherwise somewhat similar. The photograph gives a good idea of the ruffling, but being of a shortened spike, it hardly does justice to the subject.

How to Enrich the Soil.

TWO things are essential for the successful tillage of the soil and the feeding of the crops grown therein. The first is to see that the soil is rendered as perfect a rooting medium as possible. By this is meant making the texture porous, getting rid of stagnant moisture, and keeping it well supplied with humus. Soil in clods or lumps is in an unsuitable condition for good culture.

Manures judiciously applied, in conjunction with decayed vegetable matter and gritty substances, help to achieve this desirable object. Thus, in the case of heavy soils horse manure, vegetable refuse, and grit help to break up the plastic clay, create openings in the solid mass through which surface water can readily pass into the subsoil, the sunshine and rains gain easy access to the interior to sweeten and purify, and at the same time chemically change certain latent foods existing in the soil into a soluble form for the sustenance of the crops. Cow manures benefit the lighter soils, bind the particles closer together, and maintain a cool condition in hot weather. Moreover, all supply humus, vegetable mould which, owing to its dark color, absorbs the sun and warms the soil, and also provides a home for the essential bacteria organisms which are increasingly working at transforming certain substances in the soil into valuable plant food. The office of manures, then, is to primarily maintain the texture in good condition, provide a healthy pabulum for the roots, and yield a little food for the crops.

The reader must, therefore, clearly understand that he cannot continue to grow good crops without the addition of animal manure or vegetable substances of some kind. We emphasize this point because some amateurs imagine that they can dispense with manure and rely upon artificial fertilizers alone. If manures are difficult to get, collect all the leaves, weeds, lawn mowings, and refuse, put this into a heap till winter, then dig them in.

Fertilizers or plant foods, as their name correctly implies, supply food for crops only; they do not assist in any way to improve or maintain the texture of the soil in a proper condition. They are either absorbed by the plants or crops, or dissolved, and pass away into the drainage. This fact should be carefully noted. Be it known that three main elements are essential foods for crops. These are

nitrogen, phosphates and potash. Some crops require a little magnesia, but well-tilled soils, as a rule, have sufficient of this element to meet all requirements. Clay soils, too, contain potash in a latent state, but if lime be added occasionally the former will be liberated in sufficient quantity to supply the needs of crops. Light soils are deficient in potash, and so it must be supplied in the form of wood ashes, since kainit and sulphate of potash are practically unobtainable.

Some cultivators believe in the theory of supplying each plant with a special formula, but there is no real necessity to do this unless certain crops, like sweet peas or roses, are made a specialty. The various compound fertilizers advertised are far more efficacious and far more handy to use on allotments and in average gardens than home-made mixtures. The different elements have been prepared and blended in accurate and due proportion by means of special machinery, and hence are capable of being utilized more promptly and effectively by the roots than rough and ready mixtures prepared by the grower. The science and skill of the chemist, based on the accurate knowledge of the proportions of food required by crops, has enabled him to exactly determine the ideal combination of food that will yield the best results. So, then, the reader will be well advised to take advantage of scientific knowledge, and use any of the prepared fertilizers advertised.

A word of caution to novitiates. Remember that fertilizers are plant foods for immediate use, and hence these, to be used to the greatest advantage, must not be applied to the soil in autumn or winter, like animal manures, but during the growing seasons, when roots are in active growth, and can at once commence their absorption through the medium of the fine hair-like root fibres. To apply otherwise means loss of the food, as it would be dissolved by the moisture and filtered away into the sub-soil. A little fertilizer sprinkled along the drills before sowing the seeds is always a helpful encouragement to successful germination and robust growth of the resultant seedlings. Another point, avoid applying fertilizers in excess of the quantities stated in the accompanying directions for use.

In a general way apply fertilizers to vegetable crops when thinned, and again a month later. Crops like celery, mar-

rows, leeks, lettuce, etc., are benefited by frequent applications. Hardy flowers are also benefited by applications once a week until the plants are in flower. Roses, too, may be treated similarly. Greenhouse plants may be given doses frequently, once the plants are well rooted, discontinuing the supply when in flower. If given when plants are in flower, their flowering period is often shortened. Tomatoes feed frequently after the first bunch of fruit has formed.—*Gardening* (English).

The Modern Gladiolus.

The Gladiolus is the most beautiful, adaptable and useful flower in the whole range of modern floriculture, writes H. H. Groff in *The Canadian Florist*. It is the most beautiful because it embraces every known color in unexcelled purity and intensity, and also tens of thousands of combinations of these in every possible shade, variation and modification, not only of the primary colors, but in many thousands of examples peculiar to itself.

It is adaptable for the reason that it will thrive under a greater variation in condition in soil, climate and location, than any other flower of such desirable qualities. Local conditions can be overcome by methods that are today the basic principles of modern and scientific agriculture. In other words, be sufficiently interested in the success of your effort to conform to its simple demands, and the prize is yours. It will be valued more highly by you because you have achieved, which, after all, is the highest and best incentive in human endeavor.

The spikes of bloom when properly prepared for a few days in water, give an effect and a result in decorative beauty that is impossible to fitly portray in this brief recital, of that which has earned itself the title of the people's flower.

The period of bloom as a cut flower is largely under the control of the user. Its use in this respect can be extended infinitely beyond that of any other flower, while in table decoration for effect and usefulness it has no equal.

The Gladiolus is not exacting in its demands upon the soil. I have grown it on one block of land yearly for over fifteen years, the only fertilizer used being well-rotted stable manure and hardwood ashes applied before ploughing in the autumn. No fertilizers are needed on strong new soils as a rule.

Profuse watering at intervals is desir-

able where local peculiarities of soil and limited rainfall prevail during the season of active plant growth and blooming. A brief period of ripening hardens the plant tissues and assures flowers and spikes of increased durability and quality. Excessively succulent growth is not beneficial to plant, flower or corm.

For best results, plant in full exposure to the sun, in locations having free circulation of air, avoid crowding by other plants or overshadowing by trees, buildings or hedges. Plant from two to four inches deep according to the size of the corms—matured corms never less than four inches—two to four inches apart in double rows, which may be made as close as twelve inches in beds or borders.

Cut the spike when the first flower opens and place in water without overcrowding. Remove the terminal buds soon, as this checks stalk development and throws the strength into the larger and earlier maturing flowers. The end of the stalk should be shortened and the water removed daily with frequent cleansing of the vases. In shortening the stalk, cut diagonally to insure free absorption of water by the spike without the contamination and obstruction, caused by sediment, if cut at a right angle.

The fact that blooming in the shade of room or piazza modifies the field colors, from bright shades and tints to delicate flushes and shadings, also reducing the latter types to the faintest tinge of color or white, is well known to experienced growers.

To ensure this desirable result, place the vases of the highly colored types in the early morning sun for an hour or two daily, preferably after renovation and renewal of the water. This practice will also enable the retention and normal presentation of the original delicate tints and shadings referred to, if so desired.

As it takes about three days after cutting to bring the spikes into strong blooming condition, this should be allowed for in advance of the date of intended use. The spikes can be shipped a thousand miles by standing them on end in suitable baskets or boxes. On arrival, cut off the end of the stalk, and remove the terminal buds before placing in water. They will then revive quickly and with proper care give pleasure for a week or more.

The Wayside Gardens have an Iris list that is a work of art. The front cover page is one of the finest cuts that we have seen used for printing. Send for this catalogue if interested. The Wayside Gardens, Box G, Mentor, Ohio.

In My Husband's Garden.

We are admonished to give even "the devil his due," so why not husbands?

When the man of the house riseth in the dewy morn and goes forth to slay and slaughter, to dig and hoe, while his better half sleepeth, credit should be given and it should be his garden, not "ours."

I for one freely confess a dislike of personal contact with soil, and bugs and woolly worms that crawl, but I do love to cull the choice blossoms—as is my privilege—to plan new ways of arranging and adorning the home.

balance us and in the garden, no matter how small, you find heartease and quiet joy and in the endless study of Gladioli one gets so absorbed as to almost forget meal time.

Before the war one variety in Holland sold for \$8,000, putting Gladioli on a par with Orchids, with this difference, that even the poorest, humblest of us can have Gladioli when we cannot aspire to the Orchid. We mortals are not the only ones to enjoy the garden. In the sunny daytime the bumble bee seems to think the Gladioli his especial treasure and how he buzzes and fusses if you disturb his



Gladiolus Garden of Harmon W. Marsh.

Of all the flowers that bloom for our pleasure, give me Gladioli. First to greet us this year was *Halley* in her party frock of salmon pink. Next came *Baron Hulot* in his robes of royal purple velvet, the dye of which took twenty years of work to perfect. Then, beautiful beyond words to express, *Mrs. Frank Pendleton*, our own Indiana product, *Princeps*, *Glory*, *America*, *Peace*, *Red Wing* and *Mrs. Francis King* with her glorious coloring, and the many, many others.

In our little amateur garden of 2,000 bulbs, we have thirty named varieties and as I walk among them I do not agree with a recent writer that "while God made the world He has gone away and left us." It is not true, for, worldweary people, you will find Him, if you will only look into the heart of the flowers.

In this age when the peace of the entire world is at stake and life seems one vast slaughter house, we need something to

majesty. Then in the hush of twilight if you will walk softly, I can show you two tiny humming birds that come for their evening feast of sweets. There is even an old black cat whose sense of the esthetic is such that he loves to roll down the rows of blossoms and even though he bends some of the stalks, he, with his good luck, is welcome.

Then, too, the joy of giving—the sprays for the sick room, the adorning of the bride and the choicest blossoms of all that we pick in memory of the loved ones now invisible.—ROSE BLAIR MARSH in *Indianapolis Sunday Star*.

In the Editor's garden this year first class blooms of the Gladiolus were cut as late as the last of September and some fair bloom, which were chilled, during early October. Up in this northern country this does not occur many years.

MRS. AUSTIN'S TALKS.

COAXING THE AMATEUR TO EXHIBIT HIS
FLOWERS.

Yes, we have attended some of the fairs and, of course, the floral exhibits claimed first attention. Years ago the floral department was supposed to be of interest mostly to "the wimmen," but an occasional man who really loved flowers might be caught admiring them and sometimes casting sheepish glances at the fancy work. Now the men walk boldly in, tell you what a bright spot mother's dooryard used to be and that they always loved flowers, when they did not at all until they learned they were of commercial value.

They give more than a passing glance at the fancy work for wife tats and crochets, and some try to make quilts copying the patterns of their great grandmothers, but none other than an expert can do the design quilting so beautifully as that seen on the genuine old-time quilts. But to return to the flowers. Madame in town depends on the florist to give her living room the floral touch that every home requires. The busy country woman cannot do this so she grows her own. It is she who slips out to the garden after supper and works among her pets as the day cools. If friends call they know where to find her, and her modest statement, "I was only fussing with flowers a little," means that she was coaxing them into new beauty. Quite often such "loved-up" flowers grown by either man or woman, are so carefully watched, each peculiarity of form or color noted and improved, seed or bulb, whichever it may be, selected from the best each season that ere long the grower has a strain that is quite superior but does not know its value because he has not exhibited or compared them with others. It is just a part of home and would not think of taking them to the fair or a flower show, so only friends with similar interests are privileged to see them. There can be no doubt but that if the hidden beauties were brought out, the floral department would be changed to a flower show well worth visiting. How can such amateurs be induced to bring out their flowers? It might be by special invitation to bring flowers not only to exhibit in competition for a reasonable premium, but to see them, perhaps their very own, arranged by a skilled florist, who, using those fur-

nished him would give demonstrations in various arrangements. The florist might be employed by the Fair Association, or Floral Societies. If he's a live one he surely would be a member of the S. A. F. and the labor and time spent might be a part of his bit toward Universal advertising. It surely would be good advertising for himself.

If it pays the "barker" on the "pike" to scream himself hoarse to attract attention to his "greatest wonder on earth," then floral demonstration by an artistic decorator would create an educational interest that would be far reaching.

While it is true that the hybridist has worked wonders in the improvement of flowers especially the Gladiolus, the masses know very little about arrangement. Great velvety pansies stuck closely together in sand in the cover of an old time cheese box are not beautiful, neither are "table bouquets" built dome shape a foot or more in height made up of hollyhocks, garden pinks, hardy phlox, tea roses, etc., all jammed together in a colonial bouquet. I am sure our grandmothers would blush for shame to have such monstrosities on their tables. The dinner table is of interest to every human being and even the most practical cannot help but notice the difference between the absence of table flowers and at least a simple decoration. As new uses are learned so are new demands and new interest created all of which help to induce the amateur to bring his flowers before the public.

MRS. A. H. AUSTIN.

French Fruit Fund.

Horticulturists the world over are advised that a fund is being accumulated to help the orchardists and horticulturists of France to renew their plantings devastated by the war. As is well known from newspaper reports, there has been a vast amount of damage done to the horticultural industry of France in the territory occupied by the Teuton armies. A part of this is doubtless necessary war damage from the fact of occupation by an armed force and war operations, but if reports are reliable it seems evident that a systematic devastation has been practiced which will need a vast fund for its rebuilding.

Those who wish to contribute to this fund may correspond with the secretary of the Horticultural Society of New York, Museum Building, Bronx Park, N. Y., or with the secretary of the National Horticultural Society of France, Paris, France.

Irises in the Southwest.

The Iris or flag, fleur de lis of the French, is among the oldest of our cultivated flowers, writes J. J. Thornber in *California Garden*. He says: "Its name, signifying 'rainbow,' was given to it by the Greeks. The Iris is related botanically to orchids on one side and to the amaryllis and lilies on the other. It is a favorite flower with the Japanese.

"Irises constitute one of our largest groups of hardy perennial flowers; there are in cultivation now more than 100 species, with varieties almost too numerous to mention. When once established an Iris bed should not be disturbed any more than is necessary, since ordinarily the plants do not blossom well the first year after being set.

"Because of their general hardiness, and especially the drought resistant qualities of a large number of them, particularly the German Irises, they are admirably adapted for planting in Southwestern gardens. There are few flowers that are as uniformly successful in Arizona, with its wide range of growing conditions, as the Iris. They can endure some alkali, strong light, thrive in heavy or light soils, grow with much or little irrigation and endure prolonged drought and heat. With their surface growing rhizomes they can even tolerate poor drainage. To be moderately successful, they require only the most ordinary culture. On account of the ease and success with which they grow, they should find a place in every garden. It is interesting to know that a number of rare Irises from Palestine and Syria which are grown with difficulty in the Eastern states, blossom and come to perfection in the mild climates of Arizona and California.

"The writer knows of plants that have grown for several years on dry Arizona mesas with only the scant rainfall and the occasional flood water that collected in the basins surrounding them. In the heavy red clay soil in the cemetery of one of our larger Arizona mining towns, Irises are much planted and succeed beyond expectation. When established there, they grow and blossom year after year with little care, and they have come to be known to the children as 'Easter lilies.' I know of no other flower that would thrive so well under the same trying conditions.

"Irises are used to advantage in many kinds of planting, including massing, setting along borders of walks and drives, and also for naturalizing in back yards, in woods and along brooks. With their

showy flowers and strict habit of growth, they are excellent for formal bedding and they lend themselves well to artistic effects. In addition to Irises heretofore mentioned should be noted the several dwarf Irises which are splendid for low borders, and the Spanish and English Irises, the two latter bulbous species indigenous to Spain."

Digging and Storing Dahlias.

I endeavor in this location (Washington, D. C.) to lift my Dahlia tubers before a killing frost. I think it is better to cut the stalks off as close to the ground as possible. The tubers are left exposed to the air over night to dry, preferably in an open shed, and then stored in sand in a cool cellar. Last winter I used sifted coal ashes and had good results except that the roots became rather too dry. Next winter I expect to use sand and have it very slightly moist.

W. A. ORTON.

Note by the Editor—

Whatever small success the editor has made as a Gladiolus grower he has never been able to duplicate even in a small measure as a Dahlia grower, and the storage of tubers over winter has doubtless been the sticking point. However, there are others in the same boat. Prof. Orton's suggestion above leads to the thought that clean sand such as is used for cement work would be better than garden soil. A good way to moisten sand is to make a depression in the top of the pile and pour water into it, just enough to make the sand moist and not soggy wet. The storing of Dahlias through the winter if properly attended to is necessarily somewhat of a task and the space required considerable as compared with storing Gladiolus corms. Each grower must necessarily experiment for himself and some claim to have good results in storing in boxes or barrels without sand or other protective material. The kind of a cellar or storage available doubtless has much to do with how the tubers should be stored.

A subscriber asks the question as to whether a spike of Gladioli kept covered with cheesecloth is fertile from its own pollen. That is, will the pollen from the stamens carefully placed on the pistils cause it to bear seed? If anyone can answer this question definitely would be glad to hear from them. We understand that some varieties are self fertile but we are in doubt whether all varieties may be classed in this way.

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Special favors to none, and a square deal to all.

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*Gla-di'-o-lus is the singular of Gla-di'-o-li.
Correctly pronounced with accent on the syllable "di."*

War Gardens.

This year there are many people who have made a garden that either never had one before or who do not ordinarily make a garden. This work has had several influences, all of which have been for good. The gardens have produced crops which have been valuable and which are needed to supplement the regular source of food supply. Those who are unused to making a garden have learned how the work is done and will in future have more respect for the tiller of the soil and also do less complaining about the high cost of food products. Another influence, which from an esthetic standpoint will be far-reaching, is the fact that those who have made war gardens for the production of edibles this year have come in contact with the soil and will naturally in future years become interested in floriculture.

While it is doubtless true that some who ordinarily grew flowers only or flowers mostly, this year have grown vegetables only or vegetables mostly, yet we do not believe that the real flower lover has lost his interest in the subject nor do we believe that his affection for beautiful flowers will be alienated for any length of time.

Therefore, it is our impression that the spring of 1918, even though we be still further involved in war, will see flowers grown to a greater extent than ever before. There is no reason why we should neglect our flower garden even though we produce more edibles. Keep up the growing of flowers and at the same time increase the garden by planting more food stuffs.

MADISON COOPER.

Commercial Growers Should Help The Modern Gladiolus Grower.

Gladiolus growers who issue catalogues will confer a personal favor on the Editor and help themselves at the same time by mentioning THE MODERN GLADIOLUS GROWER in their printed matter, and giving the name and address of the publisher. We believe that none will dispute the fact that THE MODERN GLADIOLUS GROWER has greatly increased the popularity of the Gladiolus. It has done more than any other one influence in recent years in this direction and it, therefore, deserves the help of all who are interested.

Don't forget that the subscription price of THE MODERN GLADIOLUS GROWER will

be \$1.00 per year, and three years for \$2.00, beginning with January, 1918. Give the subscription price and the name and address of the publisher. It will occupy little space in your catalogue and will be helpful to all concerned.

We have just learned of the death of Benjamin F. White, of Terryville, Conn., which occurred on June 11, 1917. Mr. White had been in declining health for several years and his demise was not unexpected. He was a Gladiolus hybridizer of considerable experience and his varieties are well known to some of our readers; among the varieties are *September*, *America's Lady*, *King Philip*, *Harwinton*, *Dr. Goodwin*, *Farmington*, etc.

We are in receipt of the first issue of *Journal of the International Garden Club*. This publication is edited by Norman Taylor, Brooklyn Botanic Garden, Brooklyn, N. Y. The *Journal* is a finely printed semi-annual publication of nearly 300 pages. While we are not familiar with the purposes and scope of the International Garden Club, judging by the copy of the *Journal* in our hands, the work which it has undertaken must be an important one and we are pleased to have the assistance of the club in the field of promoting interest in gardening.

Newport Horticultural Society.

AUTUMN EXHIBITION.

The Newport Horticultural Society tried a new experiment this year and held their autumn exhibition at Newport Beach. The hall was well adapted for this purpose and the light was especially good.

The quality of all the exhibits was very high, the best to be had from many of the private estates being shown.

Mrs. E. B. Andrews, (V. May, gardener) won first for group of Palms and also Silver Cup for group of Ferns.

Mr. Vincent Astor, (Jas. Boyd, gardener) was awarded first for six plants in pots shown in jardinières and also first for a specimen Palm.

Mrs. T. O. Richardson, (Jas. Robertson, gardener) won a first on a magnificent specimen of Palm.

One of the finest exhibits in the show

was that of Mrs. W. G. Weld, (Jas. Watt, gardener). A display of bulbous flowers shown both cut and growing in pots. These included Lilies, Gladioli, Gloxianas, etc.

In Dahlias, Miss Fannie Foster won first for 12 Cactus, W. D. Hathaway first on 12 decorative; Mrs. T. O. Richardson first, 20 Cactus and first 25 Cactus; Geo. L. Stillman firsts, 20 Peony, 20 show, 20 Collarette; Mrs. W. G. Weld first, 20 Pompon; Fred P. Webber firsts, 25 decorative, 25 Collarette and collection of Pompon.

The Gladioli shown were remarkable for size and length of stem. The following are the awards:

Six varieties, 15 of each—Mrs. French Vanderbilt, (Daniel Hay, gardener) first, showing *Mrs. Pendleton*, *Niagara*, *Mrs. A. E. Kunderd*, *America*, *Early Pink* and *Europa*. The second was won by Mr. Stuart Duncan (Wm. McGillivray, gardener), and third by C. W. Brown & Son.

Three varieties, 15 of each—Mr. French Vanderbilt first, showing *Schwaben*, *Mrs. A. E. Kunderd* and *Mrs. Pendleton*. C. W. Brown & Son, second. The name of the third was omitted from the card.

Six spikes, red—C. W. Brown & Son first, with *Liebesfeuer*. Second, T. Stuffer Tailer (Wm. Edward, gardener) with variety *Mrs. Francis King*.

Six spikes, white—Mr. Stuart Duncan, first, with *Europa*. Miss Fannie Foster, second with *Europa*.

Six spikes, pink—Mr. Stuart Duncan first, with *Mrs. Pendleton*. Mr. French Vanderbilt, second with *America*.

Six spikes, yellow—Mr. French Vanderbilt, first with *Schwaben*. C. W. Brown & Son, second with *Niagara*.

25 spikes *Primulinus Hybrids*—Name not on card, first. C. W. Brown & Son, second.

Commercial grower collection—C. W. Brown & Son, first, Silver Medal, Thomas Cogger, second, Bronze Medal.

Many growers of Gladioli have a surplus of bloom at certain seasons of the year and it is perhaps within our province to call their attention to the fact that many people enjoy flowers who have no opportunity of growing them and this applies especially to those who are sick or who cannot move about out of doors. The thought has been expressed that flowers to the living are better than flowers to the dead, but we cannot agree that one should have precedence over the other. A floral tribute to the dead is certainly appropriate, but none the less flowers to the living are equally appropriate.

WAYSIDE RAMBLINGS.

PRONUNCIATION OF GLADIOLUS.

When you nailed your preference regarding the pronunciation of the word *Gladiolus* to the masthead, so to speak, it seemed to me that a long step had been taken in permanently settling the question. THE MODERN GLADIOLUS GROWER is the best exponent of the flower that we have, and many of us look upon it as authority in matters of this kind. As its editor, I have no doubt that you will be interested in the following incident which in my opinion, confirms your position.

A short time ago on a visit to the Agricultural Department at Washington, Dr. David Griffiths, Agriculturalist, and myself disagreed as to its correct pronunciation, he cited Dr. Beal as his authority as evidenced in the Extension Bulletin No. 9 of Cornell University (page 93), I stuck by my old friend Webster. The argument resolved itself into whether the "i" was long or short and whether it should be pronounced "die" or "dee."

The Bulletin coming from such an authoritative source made me desirous of making sure of my position, so I wrote Dr. Mann, Dean of the New York State College of Agriculture, Cornell University asking whether Dr. Beal or the Dictionary was correct. Here is his reply:

I have your letter asking about the use of the word "*Gladiolus*" referred to in one of our bulletins. The name "*Gladiolus*" is variously pronounced, as Dr. Beal says, and neither the accent nor the vowel sound seems to "stay put." All of the dictionaries I have consulted give the long "i" when the syllable in which it occurs is accented, or a short "i" when the "o" is accented. Phye's "10,000 Words Often Mispronounced" gives both pronunciations.

As a matter of fact the dictionaries do not make a pronunciation; they merely record the generally accepted usage, which is really the determining factor. Dr. Beal records his preference, and his reasons seem good and well-sustained. Possibly the dictionaries may come to his point of view. I must confess, however, that the other authorities I have seen prefer "die" to "dee," except where the accent is on the penult. To accent the penult is wrong by all the rules, yet it is the common or popular pronunciation, and is so recorded in the dictionaries.

The editor of THE MODERN GLADIOLUS GROWER puts the pronunciation "Gla-di'o-lus" as part of the regular heading of his paper. Dr. Beal is evidently in a minority, but I am not prepared to say that he is not right. A. R. MANN.

From a careful perusal of the above I quite agree with Dr. Mann "that accepted usage is the determining factor" which convinces me that your position (which is also my position) is correct.

Possibly the tendency of the flower to break out in some unexpected color at an unexpected time might extend to the

pronunciation of the word which would explain why it refuses to "stay put."

To quote from a customer (florist): "If you want to sell any of them things around here you better call them '*Gladio'-lus*' or they won't know what you are talking about."

Now, Mr. Editor, please drive another nail into that sign you have in your paper and let us see if we cannot get enough to hold it good and firm.

GEO. P. BUCK.

ORIGIN OF VARIETIES MAIZE, ROUGE TORCH,
MRS. JAMES LANCASHIRE, EZRA RUST,
CLAUD MONNET AND BALTIMORE.

In page 122 of the August issue of THE MODERN GLADIOLUS GROWER, I note an inquiry concerning varieties, amongst them *Maize*, *Mrs. James Lancashire*, and *Rouge Torch*. As three of these have been named by me, I trust my information may be acceptable.

Mrs. James Lancashire and *Rouge Torch* were both segregated at Cedar Acres. *Maize* was raised by Mr. John Umpleby of Lake View, N. Y., named and put upon the market by me. *Rouge Torch* was named at Cedar Acres, taking its name from the brilliant red torch-like tongue on inferior petals. The other was named for Mrs. James Lancashire, formerly of Alma, Mich., now of Manchester, Mass., where she has a beautiful garden at her summer home, "Graftonwood."

I, too, should be glad to know where *Ezra Rust*, *Claud Monnet* and *Baltimore* originated and if same can be procured in quantity. B. HAMMOND TRACY.

IS THERE A DOUBLE GLADIOLUS?

Have any of your readers produced a double *Gladiolus*?

A letter from Col. Sandeman was read at the meeting of the Scientific Committee of the R. H. S., London, on the 26th of August, 1913, in connection with the alleged doubling of *Gladioli*. As no specimen came with the letter, the Committee could not decide the point raised. Incidentally, Dr. Bateson remarked that if the fact were established it would be interesting, as there were several families, or orders; such, for example, as the *Labiatae*, that, although having peloric form, do not show true doubling of the flower.

In 1915 I planted *Doublet*, described as "the best and most dependable double

flowered variety," but it failed to produce a double flower for me. It would be interesting to learn how it earned its description. G. C.

SOME CORMLETS.

Last January I planted two of Richard Diener's Gladiolus bulbs, *Thos. T. Kent*, one of them 1 $\frac{1}{4}$ and the other a 2 inch size. Both bulbs sent up two stalks each. Aug. 4 they had ripened and on digging I found from the smaller bulb two 2 inch bulbs and 180 cormlets; from the other bulb there were two 2 $\frac{1}{2}$ inch bulbs and 495 cormlets—675 from the two bulbs planted, and the four flower stalks were allowed to make 24 seed pods. How's that for some increase? C. S. TAIT.

ORIGIN OF VARIETIES.

I note request of Ray P. Selover for information as to the origin and name of several varieties of Gladioli, *Ezra Rust* being among the list mentioned. This variety originated in the garden of Fred H. Stevens of Saginaw, Mich., and was named by him after one of our well known and highly esteemed citizens. Mr. Stevens also developed and named the varieties *W. R. Burt* and *Jos. W. Fordney*. JNO. J. SPENCER.

TREE LEAVES FOR HEAVY SOIL - COAL
ASHES—CULTURAL HINTS.

Those of our friends who have a heavy soil to contend with in their gardens will find it beneficial to work in a liberal amount of leaves this fall after gathering them up from the lawn. Tree leaves are one of the best of fertilizers to be found and can be used freely on any soil with good results.

Coal ashes should never be used in the garden under any conditions. Sand, char-coal and wood ashes are much better. Coal ashes absorb fertilizers; the small roots which feed the plants cannot penetrate it, as a result, if too much is used the plants turn yellow and die. A liberal application of the hoe or cultivator used prudently, is the best fertilizer known and quite essential to success. N. T.

BURLAP SACKS FOR CURING AND STORING
GLADIOLUS CORMS.

To avoid injury from moisture in Gladiolus corms while dormant I have used for several years sacks made of burlap of proper size to hold the bulbs, from a

dozen to a half peck or so. The bulbs as dug are placed in the sack, carefully labelled and tied. The sacks can be placed in the sunshine during warm days, and piled into baskets for carrying in in the evening, without mixing, and again spread out until cured. E.

REMOVING TOPS FROM GLADIOLI AT
DIGGING TIME.

It will soon be time to dig Gladioli. I sometimes see exact and explicit instructions as to the best method of cutting off the tops in harvesting the corms.

I have grown the Gladiolus for 50 years or more, acres of them sometimes. I always twist off the top as I pick up the corm, which is not injured in one case in one thousand.

I have not always been able to have the corms exposed to the sun and wind to dry them the very best, but have always cured them thoroughly. T.

Note by the Editor—

We use an ordinary pruning shears (a cheap one is pretty nearly as good as a more expensive one) and cut the tops off as they are removed from the ground. The pruning shears become dull rather rapidly but they are easily sharpened and they do not injure the hands as an ordinary shears would do. Twisting off the tops as suggested by "T" would be satisfactory where only a few hundred or possibly a few thousand were to be dug.

POTATO DIGGER FOR GLADIOLUS CORMS.

I have often wondered if any of the Gladiolus growers use the potato digger. I use the digger in the morning and let the bulbs lay on top of the ground to dry for a day or two, then put into trays to dry. All large growers must use some machine to get the bulbs out of the ground in the shortest possible time and I think the potato digger does the work fairly well. The only fault is that the little bulbs are shaken loose from the large bulbs and must be picked up the same as onion sets. F. X. WALLNER.

PINK PROGRESSION.

I wonder how many have tried *Pink Progression*. I found it as claimed, earlier than *Pink Beauty*, but lighter than I had supposed from the description; rather a flesh color than rose, with a distinct blotch and the spike quite long.

GEO. S. WOODRUFF.

Henry Youell.

The death of Henry Youell, Secretary of the American Gladiolus Society, occurred September 20, 1917, and his associates in the society mourn his death as a loss not only to the society but to the entire horticultural and floricultural interests of this country.

Mr. Youell was born in Great Yarmouth, England, July 16, 1844, and was thus 73 years of age at the time of his death.



HENRY YOEELL.

His father, whose name was also Henry Youell, was with the Royal Nurseries for many years. These nurseries were started by the grandfather, John Youell, A. L. S., and later turned over to his three sons. The firm specialized in the Gladiolus and accomplished much to make this flower well known and popular throughout England. The firm was instrumental in disseminating that grand old variety *Brenchleyensis*, still a favorite with many, and their collection of Gladioli became the largest in England.

At an early age Mr. Youell started to learn the business of his grandfather in all its branches. He had the advantage of being placed under one of the best propagators and plantsmen of that time. He was educated in private schools and

was third of a generation of florists who were distinguished in one branch or another of floriculture.

Henry Youell came to this country in 1872, making his home first in Boston where he was in charge of the grounds and gardens of the Boston City Hospital, and later he came to Syracuse where he has since resided. Mr. Youell was elected Secretary of the American Gladiolus Society in May, 1910, and has served in that capacity faithfully and efficiently up to the time of his death. He was also President of the Syracuse Florists' Club and for many years was Syracuse correspondent for the *Florists' Exchange* of New York. Mr. Youell was elected secretary of the American Gladiolus Society for the seventh consecutive time at the recent annual meeting of the society in New York.

He was married in 1867 to Emily Rose Hubbard who died in 1909. There are four surviving children: Miss Mabel Youell, of Syracuse, who succeeds to the retail Gladiolus business of her father, Henry Robert Youell, of Syracuse, and Mrs. Ernest C. Edwards, of Lyndon, and Mrs. C. J. Lambert, Pierrepont Manor, N. Y. There are ten grandchildren of whom Lieut. Robert S. Lambert and Paul C. Lambert are both serving in the U. S. army, having volunteered since the declaration of war.

We know that the many friends and associates of Henry Youell throughout the United States will join us in sincere appreciation of his work and in extending sympathy to his surviving relatives.

Beginning with January, 1918, THE MODERN GLADIOLUS GROWER will be enlarged to the new standard magazine size with the page 9" x 12". The reasons for this change are several, the chief of which is that there is a large amount of matter always pressing for publication which we cannot find space for in the present limited form of the magazine. Another good reason for increasing the size page is that our illustrations will be more effective if they can be used without so much reduction. Still another reason is that we want to print matter about other summer flowering plants as well as the Gladiolus and without in any way neglecting the Gladiolus.

With the increased size of page we expect also to use a somewhat larger type which will certainly be appreciated by some of those who, like the Editor, are beginning the journey on the shady side of the hill of life and whose eyes may perhaps not be as keen as they once were.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Rose Bushes in Cold Storage.

TO THE EDITOR:—

We have had inquiries about holding rose bushes in storage for late spring or summer planting.

Can you give us information as to accurate temperature, method of packing, etc? Should the roots be packed in moss? What basis is used for storage charges? Any information that you can give us will be appreciated.

R. D. S.

Answer:—Rose bushes should be stored at a temperature not lower than 30°F. From 30°F. to 34°F. is considered the best temperature. As a matter of fact, anything under 40°F. will give satisfactory results for retarding rose bushes for late planting.

Rose bushes should be packed in paper lined boxes with the roots protected by damp moss or excelsior or similar material.

Storage charges for goods of this kind should be figured on a basis of so much per cubic foot per month, probably in the neighborhood of 2c. to 4c. per cubic foot per month, depending on length of time in storage. Or, a charge of 4c. per cubic foot per month for the first month and 2c. for each subsequent month might be a fair charge.

Gladiolus Bulb Diseases.

ED. AMERICAN FLORIST:

Some of my Gladiolus bulbs are diseased, the trouble showing as brown spots on the bulbs. Can you suggest a remedy?

J. W. F.

Answer:—This form of scab or dry rot is apparently caused by a fungus, *Myriococcus fusan*, that infects most varieties of Gladioli and allied bulbs, such as watsonias, antholyzas, ixias and freesias, where they are grown in soil too rich and moist. The best practical method of controlling it is to plant in fresh and not over rich soil, using chemical potato fertilizer rather than stable manure. Like the potato and beet scabs, it is worse on rich alkaline soils. Ordinary corn ground with a dressing of potato fertilizer containing a good percentage of acid phosphate will be suitable.

The diseased bulbs may be treated before planting by soaking them 12 minutes in a solution of copper sulphate, 1 oz. to 10 gallons warm water; bichloride of mercury, $\frac{3}{4}$ oz. to 10 gallons water; or commercial formalin, 4 oz. to 15 gallons water. Either solution is quite effective. The husks or skins should be removed from the bulbs before treatment, and they should be planted as soon as fairly well dried off. The scabs do not usually prevent the corms from growing unless they are so numerous as to destroy the rooting surface.

In the case of rare varieties the scabs may be cut out, going well into the sound flesh, treated with one of the above antiseptic solutions and rolled in powdered sulphur before planting.

As a rule never plant Gladiolus bulbs successive years on the same soil.—W. VAN FLEET in *Am. Florist*.

Keeping Dagger and Other Ferns.

TO THE EDITOR:—

Could you give me any information as to the best way to keep ferns, *Dagger* and other varieties, over winter? Should they be kept in cold storage as the only way? Would they do well if kept in a cellar with a temperature below freezing?

Y. F., N. Y.

Answer:—*Dagger* and fancy ferns for florists' use are almost universally now kept over winter in cold storage. They keep so much better under that treatment that all other methods of preserving them over winter, unless it be on a very small scale, have become obsolete. Undoubtedly they may be kept in a cellar where the temperature ranges from 32 to 40°, but, of course, that practically means cold storage.—*Florists' Exchange*.

These are war times and florists who have waste space among their carnations will do well to try some of the Colvillei family of Gladioli for early forcing. Efficiency in utilizing space in expensive green-house temperature means additional profits.

Planting Sweet Peas in the Fall.

Good results from fall planting of sweet peas have been quite common and as the work in connection with same is in the most respects the same as for the spring sown crop, we are glad to give an outline of how the fall planting is conducted.

In the fall seed should be sown just late enough to insure its successful germination which would ordinarily in the latitude of New York State be from the 15th of October to November 1st. The sweet pea is a native of Sicily in the Mediterranean and yet it is hardy enough to stand the severe winters of Northern New York. If the seeds are well germinated with but little growth above ground before hard frost sets in the best results are secured, and hard freezing weather holds the plants in a dormant condition. Covering with straw, leaves, tree branches or light boards is desirable after the ground is frozen.

When the weather turns warm in the spring by the middle to the end of March or the first of April the protective material may be removed and the soil along the rows forked and loosened. Sweet peas planted in this way if they get the proper start in the fall will bloom from two to four weeks in advance of spring planted peas and besides, they are reported as being of stronger growth and that they will bloom longer and are in every way preferable. Sometimes if the winters are very severe winter killing will result, but on well drained soils there is little danger of this.

Lansing, Michigan, has Gladiolus Show.

The Gladiolus is now an important part of the commercial activities of the enterprising city of Lansing, Mich. The Capital National Bank recently extended an invitation to the florists of Lansing to use its lobby for a Gladiolus exhibition so that the people of the city might better become acquainted with this new industry. The show was held the week of Sept. 10th and was a great success. The management of the bank considers making it an annual affair.

The lobby of the bank, which is finished in marble, made an excellent background for the show and the Lansing florists helped with the decorations. A large crowd of Lansing people, many of whom viewed the Gladiolus for the first time, attended the show and doubtless many of them will become Gladiolus enthusiasts.

Earl Edgerton, probably the largest

grower of Gladioli in the neighborhood of Lansing, had a large exhibit and showed an attractive display of all the standard varieties and many of the new sorts including the Kunder productions.

L. W. Hoisington, who also makes a specialty of Gladioli, likewise made a fine display, also showing Asters and other annuals.

Fred W. Baumgras, a third exhibitor, had fine stock and in good quantity.

The amateurs, or private gardeners, turned out well and a number of them exhibited fine flowers as a part of the show.

Here is an example which may be well followed by other cities and which will help popularize the Gladiolus. Gladiolus growers should make an effort to start annual exhibitions wherever possible, either in connection with some other regular flower show or exhibition of some kind or separately as above described.

Subscription Premium Corms Bring Fine Bloom.

One of our subscribers who made one attempt at growing the Gladiolus and had poor success was induced to try it again through our special premium offer of Gladiolus corms with a subscription to THE MODERN GLADIOLUS GROWER and we are pleased to report her success as follows:

I wish to thank you for the bulbs of the variety *Mrs. Francis King* sent me as premium for subscription to THE MODERN GLADIOLUS GROWER. There were 134 and they all bloomed with spikes three and four feet tall and each flower extremely large. They were planted in open ground with no shade and in previously uncultivated soil which had been in grass and weeds.

For two years before I had been much interested in the Gladiolus, but after purchasing one hundred bulbs which proved to be infected with gray lice, I was quite disheartened. I treated these bulbs with sulphur and planted them, but only one or two survived.

Having had such success from the bulbs you sent, I am again much interested.

Mrs. C. M.

It should be noted in this connection that the corms sent to the subscriber were of mixed sizes, some of them indeed were quite small down to $\frac{3}{8}$ ". This goes to show the great blooming qualities of small corms of the variety, *Mrs. Francis King*.

We were late in getting out THE MODERN GLADIOLUS GROWER last month nearly two weeks and the only excuse is the great demand on the time of the Editor for all sorts of work. This month we are again late, but not quite as late as last month and next month we hope to be still nearer on time.

CLASSIFIED ADVERTISING.

Growers having surplus stock for sale will find this department effective in disposing of it. Five lines (about forty words) \$1.00 per insertion. Additional lines 15c. each.

FALL BARGAIN LIST of Gladiolus Bulbs for Cash. Mixture of named varieties and Childs seedlings $\frac{1}{4}$ to $\frac{1}{2}$ inch per 1000, \$3.00; $\frac{1}{2}$ to $\frac{3}{4}$ in., \$5.00; Panama, $\frac{1}{2}$ inch and less \$5.00. No order taken for less than 500 bulbs. Woodside Gladioli Gardens, San Mateo, California.

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Our stock is now sufficient to offer this sterling novelty at a reasonable price. Let us quote you.

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1 Peony root. Large, soft pink flowers. 25c., 5 for \$1.00.

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Our weather conditions were favorable, and we expect to harvest a large crop of the above named varieties.

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THE KING

YOU probably remember that we bought the entire stock of this variety of Mr. J. L. Moore last winter and offered some of the bulbs in the columns of *The Modern Gladiolus Grower*. We find this fall upon this stock coming into bloom that there is about 5% of a salmon red mixed in with it. We are sorry that we sold any of this stock until we had grown it for a year and cleaned it up but we stand ready to make good to anyone who bought any of this stock from us.

Our price for the above variety will be the same as last year—

1st size bulbs \$1 per doz.

Planting size, \$1 per 100

Bulblets \$2 per 1000

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I have sold out on 1st size NARCISSUS except Barrii Consp., \$1.50; Sulphur Pheonix, \$1.50; Pearl White, \$1.50; Soleil d'Or, \$1.50.

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All per 100—f. o. b. here.

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I am now digging some very fine bulbs. If interested let me know your wants.

C. S. TAIT
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Beautiful Carmine with white throat.

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The best and most distinct of all the Primulinus Type.

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Willis E. Fryer

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THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
Published Monthly by Madison Cooper, Calcium, New York.

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GLADIOLUS—WINIFRED.

This is a seedling of *Merceria* and was originated by Matthew Crawford. It is of medium size and with a strong stem that is never likely to be broken down by the wind. The spike is always strong and not liable to crook.

The color is an intense scarlet with a white blotch as indicated by the photograph. Matthew Crawford, the originator, states that of all the red varieties this is perhaps the only real scarlet.

Uses of the Gladiolus and its Culture.

BY B. HAMMOND TRACY in *The Gardeners' Chronicle of America*.

THINGS happen so quietly in the floral world that the general public knows little about the development along some special line; and this is very noticeably true of the Gladiolus—the aristocrat of the summer garden, the good old-fashioned “gladiola” of our grandmothers' gardens. From the time that M. Souchet, the gardener for Napoleon III, introduced the Gladiolus as a florist's flower, the progress in its culture and development has been most remarkable. The results of the outpourings of nature's horn of plenty are shown in no flower more than the Gladiolus, and the garden glory of this magnificent flower, no longer called “too stiff,” makes it a pleasure all through the summer.

The modern Gladiolus is a flower of the future, for, though much is known of it as a florist's flower, its possibilities as a decorative asset in both homes and gardens are as yet little known or appreciated. It is perhaps more essentially a cut flower, but most satisfactory effects may be achieved by judicious planting.

Planted in clumps in front of shrubbery, or in the hardy border, they will give a mass of color from early July until cut down by the first envious frost, this continued period of bloom being made possible by successive plantings, or by planting different sized bulbs. In this position nothing gives greater satisfaction than the brilliant rose of Gladiolus *Independence*, which in coloring and lasting qualities is unsurpassed. *Brenchleyensis*, *Isaac Buchanan*, and *Augusta* are all especially fine for garden work and are not prohibitive in price. The variety *Niagara*, with its most remarkable coloring, a very clear nankeen or creamy buff, with just a pencil mark of the faintest lavender in the throat, commands attention whether seen in the garden or in the vase. Planted above a carpet of purple Petunias or surrounded by the rich tones of Salpiglossis, it is most effective. The buff of *Niagara*, with the brown of *Africa*, gives an unusual floral color combination and a most attractive one. A truly lovely vase of pastel colors may be had with *Niagara*, *Pink Perfection* and *Baron Hulot* or *Badenia*.

The soft coral pink of Gladiolus *Dawn* and the sensational effect produced by masses of this coloring, coupled with its wonderful vitality, make it an indispensable adjunct in any garden scheme. *Baron Hulot* and *Badenia* are the finest of the

blue Gladioli. The deep, rich, blue-purple of *Baron Hulot* and the true lavender of *Badenia* bring to mind endless color combinations for the garden and the house—*Badenia*, planted with *Spring Song*, with pink snapdragons at the base, or *Badenia* and *Baron Hulot* blooming above branching *Daybreak Asters*. A most successful combination has been *Baron Hulot* with the soft apricot pink of *Hollandia* or *Scarsdale* and *Schwaben*.

Panama, the brilliant new rose pink, with its sister bloom, *America*, placed in a vase with Gladiolus *Lily Lehman* needs only to be tried to prove its beauty.

In all the gorgeous array of colors to be found in the lists of Gladioli, the variety, *Mrs. Francis King*, that wonderful flame pink, is unsurpassed. For brilliancy of coloring and fine form it has no rivals in decorative effect.

Equally as beautiful and of the same graceful form, with a softer coral coloring, is *Halley*, a magnificent, large-flowered variety and especially popular because of its early and extended season of bloom.

The *Primulinus Hybrids* in all their daintiness of form and coloring give an entirely new note to Gladiolus productions. The attractive shape of the blooms and the wide range of color, from the lightest yellow, through bronze and orange, to deepest rose, have made these hybrids very desirable.

The gorgeous coloring of *Mrs. Frank Pendleton* finds a pleasing foil in the silvery whiteness of *Glory of Holland* or *Queen of Whites*.

A porch vase of *Jean Dicalafoy* or *Maize* arranged with the carmine of *Jesse Palmer* or the brilliant crimson of *Lillian Morrissey* breathes a very hearty welcome.

No collection or garden will be quite complete without the glorious blue of *Marie de Ruyter* or *Violet Perfection*, the yellow of *Schwaben* or *Glory of Nordwijk*. The royal *Rajah*, *Red Emperor*, and *Empress of India* are the very finest of the rich, deep reds and are particularly desirable.

A point of interest is the selection of bulbs. It is a mistake to entertain the notion that size is virtue. It is essential that the bulbs should be of the proper age, fully developed and healthy rather than over-fed, soft, and punky, though large.

In cutting the flower spikes, it is ruinous to cut the stalk where the flowers

end. There must be some foliage to lend grace. Cut the spikes so as to leave two or three leaves on your bulb root, thus giving you a flower spike sometimes nearly four feet long, leaving plenty of strength for the bulb, and beauty for the decoration.

The Gladiolus in the garden is an unsightly object if left to bloom to its limit. The flower-loving public must be educated to a willingness to cut the spikes when they have bloomed a little while in the garden, then to finish their development in the house. Nothing is more unsightly than a mass of ragged, betasseled Gladioli bending in the wind, when it is so easy to pick off the withered blooms, if one does not wish them for house decoration.

The Gladiolus is a flower of easy culture and does well in any soil, but should be planted in full exposure to the sun. It will do well planted in the hardy borders or in front of shrubbery. Many of the best varieties produce small bulbs and the largest bulbs do not always give the best results. It is essential that the bulb should be of blooming age rather than size. Soil should be well prepared in the early spring, with a good coating of agricultural lime and bone meal thoroughly worked into the soil, but fresh stable manure should never be used, except where the ground may be manured the previous fall and well worked over in the spring before planting.

The various ways in which the Gladiolus can be planted make it one of the most showy and attractive garden flowers. Planted in round, oblong or square beds, planting bulbs from four to six inches apart, so that they may be weeded and hand-hoed, they will give a wealth of color not equalled by any other flower.

Plantings for cut flowers should be made in rows eighteen inches apart, with bulbs three inches apart in the row, covering from four to six inches, according to the size of the bulbs; press the earth firmly around each bulb. Care should be taken to plant the bulbs right side up, so that the new bulb, which forms on top will not be pushed too near the surface. For succession of bloom, plant from the time the ground can be worked until July 1.

After the spike begins to show, all weeds should be removed, and if the soil is kept thoroughly worked, watering will hardly be necessary; they are great drinkers, however, and respond quickly to water. Always water after sundown.

The lower bulb, the one you plant, dies away and a new one forms on top, before blossoming, and if not planted deep, it

will be so close to the top of the ground after forming, that there will be no ground support for the bloom spike. Because of this lack of support, it is easily blown over and the roots loosened or broken off. By deep planting you do away with staking.

A Simple Flower Holder for a Shallow Bowl or Dish.

The following will be found a most effective and at the same time inexpensive flower holder:

Procure a yard of the finest wire netting and cut it into pieces each one foot square; each of these pieces will make a flower holder.

Take each piece and bend the corner towards the centre, then place it in the bowl, corners downwards, and gradually crumple it up until it roughly fits and fills the receptacle.

It should be covered with a layer of moss, and will then be found to be a really satisfactory flower holder.

In thrusting the stems of the flowers through the moss the several layers of wires hold them firmly in their place, so that each day it is easy to lift the whole at once, and empty and refill the bowl with fresh water.

A very artistic effect may be obtained by using just a few flowers with their foliage; in this way they appear to be growing in the bowl.

It will make an agreeable change from the tall vases usually employed for flowers with long stems, and will be found most effective in grouping Narcissus, Sweet Peas, Iris and similar flowers.—*The Home Gardener* (Australia).

In the October issue was a description of the Gladiolus show at Lansing, Mich. Earl Edgerton, one of the exhibitors, sends us a card which was furnished to all exhibitors to designate their exhibits and varieties. This card was about 2 $\frac{1}{4}$ " x 3 $\frac{3}{4}$ " in size and about as follows:

GROWN BY

EARL EDGERTON

Gladiolus Specialist.

The top line is for writing in the name of the variety and this is a suggestion which should be generally adopted for flower shows.

The Value of Peonies.

These, the most gorgeous of all hardy herbaceous flowers, are also the most neglected by modern gardeners. It may be that their robustness and brilliancy are their undoing, for nobody would grudge them the space they require while in their full glory of gorgeous blossoming, but when the flowers have fallen, and the foliage begins to ripen, past favors are soon forgotten in the presence of a large break in the floral scheme. This objection can easily be overcome by intelligent anticipation in preparing summer and autumn flowering plants to place around the Peony clumps, to furnish the positions for the remainder of the season. For this purpose no plants are more suitable than Antirrhinums, which, as they thrive in dry and poor soils, will not necessitate much root disturbance of the Peonies. These remarks apply to the herbaceous Peonies, chiefly to the wonderful hybrids raised by crossing the European and Chinese species. As the season of the former is May and the latter usually throughout June and well into July, the union has increased the season of the Peony to a great extent.

But, although the natural place of the herbaceous Peony would seem to be in the flower border, this is by no means the only place where they can be used. No one can be a greater admirer than myself of the glorious masses of color given by the double red varieties which have much of Peony *officinalis* in them, nor of the more delicate charm of many of *P. albiflora* parentage, but all of these can be even more effective elsewhere. During the season of flower, herbaceous Peonies planted either as a mass of one variety or in tasteful mixtures in a large lawn bed, make a splendid attraction, but this method makes difficulties for the rest of the year. For the most part this may be overcome by associating them with standard Pyruses or peaches, and carpeting or bordering them with Violas. On the margin of the lawn, or where garden and woodland meet, bold groups, though they should not be too large, of the brightest colored varieties, are exceedingly attractive, and in such positions need cause no anxiety when not in flower. The ample foliage, bold habit, and showy blossoms of many varieties make herbaceous Peonies eminently suitable for planting in the shrubbery borders or near the carriage drive.

The herbaceous Peony is deserving of much more attention in wild gardening than it at present receives. Peony *offici-*

nalis is particularly valuable, as at the first approach of spring the ground is brightened by the beautiful red shoots, which retain their welcome coloring until the flower buds become prominent. *P. lobata*, said to be merely a variety of *P. officinalis*, of a lovely satiny pink color; *P. tenuifolia*, which has the charm of graceful funnel like leaves in addition to dark crimson flowers; or *P. albiflora*, the Oriental species from which many hybrids get their erect habit, are a few of the most useful sorts.

Unlike the herbaceous Peonies, which may be planted in shady places in full expectation that they will flourish there, Peony Mountain must have a place in the sun if it is expected to thrive, though both types are alike in loving the good things of the soil, and should have liberal treatment. While they are somewhat impatient of root disturbance, the herbaceous sorts may be relied upon to soon make a good show, but the tree Peony is of slower growth, and requires several years before much effect is produced. In the garden Peony Mountain and its many splendid varieties are seen at their best as lawn plants where they receive plenty of sunshine, but shelter from easterly winds is necessary. If young plants are being used, an effect is obtained soonest when three or five are planted moderately near together in the same bed. Although it is a shrub, the Mountain Peony is not suitable for culture in the shrubbery; it requires isolation.—*Gardeners' Magazine* (English).

Cleaning Out Hedges.

A hedge should always command care and attention. Very often they are allowed to become over-run by long grasses and weeds, and probably a collecting spot for dust, twigs, and an assortment of rubbish blown about by the wind.

Besides making their appearance unsightly, this state of affairs checks the growth of the hedge.

It should also be remembered that the neater the hedge the better set-off it is to the flowers and shrubs within its bounds.

The present is a good time for clearing away all weeds and foreign matter that collects at the base. Hedges as a rule receive very little thought as regards manuring. Of course it is not advisable to induce a rank growth, but a consistently healthy one cannot be maintained without manure and a quantity of good loam annually after about four or five years from the time of planting.—*The Home Gardener* (Australia.)

MRS. AUSTIN'S TALKS.

THE BUCKEYE TREE.

The first thing I remember was a dreamy sense of warmth and comfort which was quickly followed by a feeling of being smothered and a desire to leave my snug bed. In further awakenment I cautiously pushed a foot forth until it pressed down into the soft soil which seemed to grasp and hold it firmly. Then with a tremendous effort I threw the coverings from my head and obtained my first glimpse of this beautiful world. That was fifty-five years ago last spring and it was the previous fall that my owner planted the seed, a buckeye, from which I grew. I was healthy from the start, due partly, I imagine, to my being planted on my native soil, but I might feel a little more at home if nearer the middle of the state, for my owner says the *Aesculus Glabra*, which is my botanical name, is a native of central Ohio and no other place. However, we stand transplanting well, for Buckeye trees are now growing in many different states. Perhaps I am not as large a tree as you might expect for one of my age but I have poise and dignity befitting my years. I have had my share of joys and sorrows and could relate many interesting incidents.

My greatest grievance is in mistaken identity for I am constantly being mistaken for the Horse-chestnut tree. I suppose I ought not to notice such trifling things and perhaps I would not if I were growing on foreign soil but to have the Horse-chestnut, who is a genuine foreigner, an Asiatic, come right here into my own dear Ohio and from a young stripling attain my size in less than half the time I require and then pass himself off as a Buckeye, is certainly galling. Of course, it is only ignorant people that do not know the difference between us and I would not care a rap for their opinions if the Horse-chestnut was not so conceited and when someone speaks of the great Buckeye State in his presence he bows and rustles his leaves as much as to say: "This is a Buckeye Tree."

Our resemblance is only in our flowers and fruits and any one fairly observant can easily see the difference. My flowers are a beautiful pale yellow and the nuts, of which there is seldom more than one in a burr, are smooth and remain smooth no matter how long they are kept, and you know that some people think they must always have a Buckeye about them,

to keep rheumatism away, they say, which, of course, makes me smile. I think a bit of my bark would be more liable to keep diseases away for it does not smell very nice. Some people call it a fetid odor, and a bit of it fastened to a cord and worn at the neck might (just might, you know) possess the same virtue as the little ill smelling bags children used to wear to keep diseases away.

The flowers of the Horse-chestnut are similar to mine in form but the color is white with purple markings and there are sometimes two or three nuts, which wrinkle with age or when old and dry, in a burr.

Our manner of growth is entirely different. My branches grow so as to form a spear shaped top and make my entire season's growth in three or four weeks' time, very early in spring, then rest. But my beautifully lanced leaves are busy planning a joyous autumn gown which I don early, for I am one of the first to do my bit in protection of mother earth during the winter.

The Horse-chestnut works all summer pushing its branches outward and forming a round top while its smooth uncut leaves seem to have no interest only to hang on as long as possible.

The above are some of the differences between us, and now that I have told you about them, the next time you happen along please notice my form, foliage, flowers and fruit and do not call me a Horse-chestnut for I am a Buckeye.

Now, I am going to tell you the greatest of all things about myself. It is something of which I am very proud. It's a tradition. An Indian tradition. When my owner was a very small boy, and he says he can remember it as well as if it happened yesterday, a very strange looking man visited his father. He was dressed much like woodsmen are, but called himself a missionary and said that he taught religion to the Indians. He lived with them a large part of his time and learned their ways and, he said, that when they wanted to catch fish, they would take the kernel from inside the Buckeye nuts, pound fine, and throw upon the water. The fish would eat and become stupefied, turning on their sides and coming to the surface where they were easily caught. The effects were not lasting and not harmful and if left in the water they would soon be as lively as ever.

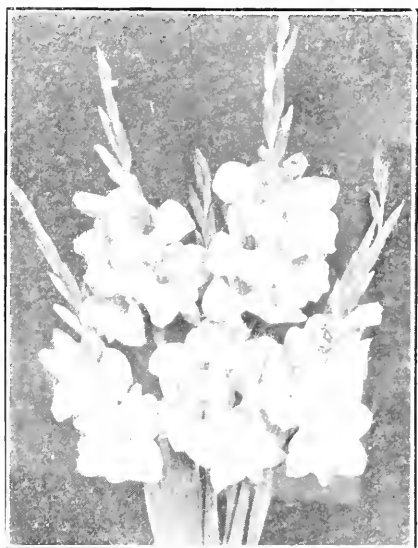
MRS. A. H. AUSTIN.

It has been a wet fall for digging here in New York State but we hope for a mild and dry November.

Gladiolus Growing in the South.

By C. S. TAIT.

Why not? We have the soil and climate. The writer planted four bushels of cormlets in Aug., 1916, that were dug in October 1915. In this lot were *America*, *Halley* and other kinds. By December they were nice bulbs and were left in the ground over winter. When the freeze came first week in February they were up and growing fine, but were killed to the ground. In a few days they were up again. In May we were cutting some fine spikes. Sending photo of five *Americas* cut from lot. This bunch had a spread of fifteen inches. Some *Hollandia* heads were 20 inches long with 14 inches of open flowers.



Five spikes of *America* grown by Mr. Tait from cormlets planted in August 1916. The flowers were cut in the last week of May, 1917. The bunch is 15 inches across.

Other kinds were equally as good. In November I planted four bushels more of the same lot of cormlets; they are now coming into bloom. They were left undisturbed over winter. No mulch or extra dirt put on them. These will make first and second size bulbs by fall. For information, would say that these cormlets were planted in a moist soil, covered about 6" deep, and about ten days later half the soil was raked off and I never saw cormlets come up as well. Last July I sowed some Gladiolus seed. They are now (June) coming into bloom. Bulbs were left in the

ground over winter. Last March I sowed some seed. They were blooming in July and kept at it until October. This year I made my first planting January 10th and have planted about every two weeks since then, and expect to keep at it until the middle of August. I now have thousands of little seedlings up and growing fine. The seed can be sowed here out doors every month except December and January. I would prefer planting cormlets in the fall about two to three weeks after digging. This gives them a chance to ripen and I believe they sprout quicker than when planted as soon as dug. Ten months out of twelve to plant and grow Gladioli--what more do you want?

Charm of Flowers.

Barring the equally ancient and alluring pastime of going afishing, no hobby has a stronger grip on its devotees than gardening. At 4 o'clock of a summer morning Celia Thaxter could be found at work in her radiant little island plot, a sister in spirit to old Chaucer when on his knees in the grass at dawn to watch a daisy open. And these were not exceptional, not extraordinary, cases of devotion. They were merely typical exponents of the true gardener's passion.

Nor is this tense enthusiasm fleeting. Not in the least. It is not more transient than the bibliomaniac's passion, no more evanescent than the collector's zeal, which only death can quench. It is no sudden, youthful fervor. Indeed, it is rarely found in youth at the storm and stress period, while it may be observed to be strongest in those for whom the days of wild enthusiasm are over. The bachelor clergyman or the quietest of spinsters, for whom other passion is nonexistent, will yet lavish on their gardens enough devotion to have on the heart of the most obdurate of persons, enough tenderness to have sufficed for the mothering of a dozen little ones. A garden is the world of the recluse, the passion of the lone man or woman, the diversion of statesmen, the recreation of poets and artists of all ages, except perhaps musicians, who may be overcareful of their hands.—FRANCES DUNCAN in *Scrubner's*.

The subscription rate of THE MODERN GLADIOLUS GROWER after Jan. 1, 1918, will be \$2 for three years. Renewals will be accepted at the present rate of \$1.50 for three years until January 1st. There is no easier way to make money than to renew for any period you wish at the present rate.

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PUBLISHED MONTHLY ON THE FIRST OF THE MONTH BY
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No. 11

*Gla-di'o-lus is the singular of Gla-di'o-li.
Correctly pronounced with accent on the syllable "di."*

Business Announcement.

Beginning with January, 1918, the size of the page of THE MODERN GLADIOLUS GROWER will be 9" x 12". The type page will be just about twice the area of what it is at present and there will be three columns. The present type is eight point. The type we will use in the larger size will be nine point or one size larger. We expect to maintain the typographical excellence which has always characterized THE MODERN GLADIOLUS GROWER and the larger type will make the matter more easily read and be more appropriate for the size of the page. There will be no material change in advertising rates for the same amount of space, but as the size of the page will be about double what it is now, the page rate will necessarily be about double the present rate.

As we have pointed out before, there are a number of important advantages in the larger size page. The chief advantage is an artistic one. We can use half-tones of proper size to suitably illustrate any given subject which is not possible now. A second advantage is the matter

of economy in printing. A given type area in the new size will cost less than the same type area in the present size as there is less press-work and less paper required. The Gladiolus has always been our specialty, but we have printed also considerable matter on other subjects as well. The present size page doesn't give us space to print matter about other flowers as we would like. With the changed size, the Gladiolus will not in any way be neglected, but more matter on other subjects will be used.

The December issue will complete the fourth volume of the present size magazine. We dislike to break the uniform size of the bound volumes, but it cannot well be avoided and there seems to be a decided tendency of all monthly publications to adopt the new magazine size, 9" x 12". We feel that the advantages outweigh the disadvantages of the change and that the 9" x 12" page should be maintained as a permanent size.

Our friends have for the most part commented favorably on the proposed change and we believe that it will work out to good advantage and with satisfaction all around. MADISON COOPER.

Under head of "Gladiolus Growing in the South," Mr. Tait makes out a strong case in favor of the South as a rapid grower of Gladiolus corms. We wonder whether there may be some offsetting disadvantage. We will be glad to hear from Gladiolus growers who have had experience both in the North and South as to comparative possibilities of the two sections.

Commenting on the article by B. F. Stalnaker in the August issue of THE MODERN GLADIOLUS GROWER, A. E. Kunderd, of Goshen, Ind., has promised to write more about his cultural methods. Mr. Kunderd disclaims any intention in what is said in his catalogue about growing exhibition Gladioli to have it inferred that the directions there given are his own field culture.

Mrs. Austin's Talks this month tells us about the Buckeye tree from which the state of Ohio gets its distinctive appellation, "The Buckeye State." Not many of us know what the Buckeye tree is as compared, for instance, with the horse-chestnut, with which we are all more or less familiar, and Mrs. Austin, therefore, tells us in her usual pleasing way just what the Buckeye tree is.

Antirrhinums.

The Antirrhinums, popularly known as Snapdragons, are among the most useful of our summer flowering plants. As they thrive best when grown in warm dry situations, they are particularly suitable for our Australian gardens, and for making a bright display at a moderate cost there are not many flowers which can excel them. The range of coloring in the different varieties is now much greater than it was a few years ago. The size of blooms, and habit of plants has also been much improved of late years by the efforts of hybridisers and other enthusiasts, who have turned their attention to this popular flower. The modern Snapdragons are, therefore, greatly in advance of the old-fashioned ones, for whatever purpose in the garden they may be used. They thrive well as rocky plants, and will push their roots down in

crevices between rocks, where they seem to feel quite at home.

Antirrhinums are divided into three sections—first, tall, which grow up to three feet in height, and bear long spikes of bloom. These should be staked before they come into bloom, as they are apt to suffer from strong winds. Second, semi-tall. This is the most popular section for bedding, as they can be had in separate colors, and they do not usually require staking. They grow from 15" to 18" high, and are of stiffer habit and more floriferous than the tall kinds. The third section is the Dwarf, or "Tom Thumb" varieties. These grow about nine inches high and are the best for edgings and small beds. If given space enough these will spread out into compact bushes, and flower profusely all summer.

CULTURE.

The soil most suitable for the growth of Antirrhinums is one that is light, well drained, and not over rich. But almost any garden soil will grow them, provided it is free from stagnant moisture. Strong manure should never be used in their cultivation, as it tends to promote a rank growth of foliage at the expense of the flowers. The best way to propagate them is from seed, which may be sown either in autumn or early spring in boxes or pans of fine sandy soil. The seed, being fine, should be sprinkled on the surface of the soil and barely covered with fine sand. The boxes should be covered with glass and kept in a warm place such as a sunny verandah, and care must be taken that the surface of the soil in the boxes does not become dry until germination has taken place. When the seedlings have become large enough to handle, they should be transplanted into other boxes, giving them room enough to develop into sturdy plants ready for planting out into their flowering positions. They must not be over watered at any stage of their growth, as they are liable to "damp off." When planting out, allow the semi dwarf kinds to stand 12" apart, the dwarfs about the same distance, and the tall kinds 18" or 2' apart. They will not need much after attention beyond keeping down weeds, keeping the flower spikes cut out as soon as they have finished blooming, and an occasional watering in dry weather. Choice varieties may be propagated from cuttings or slips taken off near the ground and planted in sandy soil, where they can be partially shaded until rooting takes place.—BY E. GRAY, Public Gardens, Kyneton.—From *The Home Gardener* (Australia.)

WAYSIDE RAMBLINGS.

DIVIDING GLADIOLUS CORNS TO PROMOTE INCREASE.

The September number of THE MODERN GLADIOLUS GROWER is to hand, and in it I see below a statement by another subscriber, an extract from a letter sent you some time ago in regard to cutting Gladiolus corns for increase. Well, this fall I can give concrete evidence:

Last year and year before I had a stand of *Americas* that disgusted me completely; they came blind, or not at all, and they dawdled along if they did come, and then the foliage yellowed and, altogether, they were an unlovely lot. I suspect they were Holland stock, and old corns at that, although supposed to be American grown. This spring I had to plant in early April because in May I would be away from home, and I came to those *Americas* when I was tired from planting 1,000 corns, more or less. I got a knife and split every corm in two pieces, some of them in three, and planted them. When I returned in June the Glads were just appearing, but those *Americas* were not to be seen. By the first of July they were up and growing finely, however, and the first of August they began to bloom. If Glads could get "hidebound" I should think that was what had ailed them, for out of the whole lot there were but six that failed to give very good spikes of bloom with good foliage. The ground had not been well fertilized, and I had to use phosphate on the Glads twice to help them along, but they have done finely. I think. It has been an untoward season.

If I were anxious to increase my stock of any one kind quickly, I should not hesitate, after my experience of this year, to cut the corns to a single "eye" provided I had the ground well enriched with good stable manure in addition to the phosphates to be used. Good soil makes a great deal of difference I find. I am now wondering how the increase by bulblets will turn out. They have produced very few in the two years I've had them.

Severe frosts have already visited us here, (Sept. 18th) and one light freeze, but the good old Glads were right on the job, uninjured and ready for the fair this week. Dahlias in some places are totally destroyed as to bloom, and when I look at the fussy things I say to myself that others may place their affections on them and see the first frost cut them down when they are just getting down to business, but give me the Glads. I have a

good collection of Dahlias, but I never keep many roots. The Glads I grow on from the increase by bulblet and so have always some to flower very late even if planted early since they are slower in maturing.

I am glad to be able to tell you my sliced-up corns did well, but I've been so busy I shouldn't have thought of writing, most likely, if I hadn't seen the items in THE MODERN GLADIOLUS GROWER.

MINNIE E. MAIN.

DIGGING GLADIOLI—REMOVING TOPS AT DIGGING TIME, ETC.

I notice in THE MODERN GLADIOLUS GROWER, just received, a question as to the method of removing the tops of Gladioli. We Independence growers always remove the tops immediately, while they are fresh and brittle, breaking them quickly across the thumb. The men are not allowed to twist them off, but if any are tough they are cut off across the edge of the box with a short knife, usually such as is used in the kitchen. If the tops are left to dry they become too tough and have to be cut off; which takes more time than we can spare. In digging very small stock, grown from the cormel, we remove the top soil with a sharp spade, cutting as low as possible without cutting the corns, then loosen the soil very close to the row of corns, preferably on both sides. The soil, bulbs and bulblets are then scooped out lengthwise the row and are dropped into the sieve. In digging the larger corns we use a fork, putting it down quite perpendicularly just below the depth of the corns, then dropping the handle so as to give a pry to raise and loosen the roots. Then they can be pulled out in bunches of half a dozen or more and nearly all the bulblets come with them. When the sieves, home-made, rectangular affairs, are full as we can carry them, the tops are broken off and the soil shaken out. The cut off tops are used at night to protect the drying crates if there is any danger of frost or rain. These crates are of lath bottom, about four feet long and two feet wide.

Mr. Black, to save the labor of loosening with a fork, used a one horse plow, removing the mould board and readjusting the plow and beam so as to give the plow a strong turn to the left. A curved board which he happened to have, was attached to the beam so as to run on the ground as a sort of guide. The whole thing was crudely made, in a hurry, but

worked fairly well, not turning the bulbs out of ground but loosening them so that they were easily pulled up. As labor is dear in Minnesota I have no doubt he is using some such thing this year. Perhaps he will tell us more exactly how the contrivance was made. I have just begun digging today, Oct. 15th.

GEO. S. WOODRUFF.

BLUE GLADIOLI.

I have been much struck with the interest taken by the general public in blue Gladioli at the various shows I have attended from time to time. Invariably when I have asked a lady whether she would like to take a few spikes, I have received the reply: "Thank you, I should like to have a blue one, if I may?" I have been anxious to add some more blues to my collection, but it is very difficult to do so from a catalogue. I purchased all the blue varieties listed by one grower but have not yet had much success. So many of them are violet. It would be interesting if you could prevail on your readers to send in a report early in November covering all the blue, or so-called blue, varieties grown by them. The information should include: (a) Name; (b) date of blooming; (c) quality of spike; (d) height; (e) state or county where grown; (f) the order of merit according to the individual grower.

My suggestion may be too late for this year except for those growers who have been in the habit of keeping records.

If anything should come of this suggestion, it might be followed next year with a report on the named varieties of the *Primulinus Hybrids*. SMILAX.

PRONOUNCING GLADIOLUS.

This is the point about that *Gla-di-'o-lus* argument. A *common* name is one used *commonly* for the plant. Therefore, since the plant is commonly known as *Gla-di-o-'lus* that is the name of the plant, in spite of the dictionaries or the sciolists. So is a certain other plant properly called trailing ar-'bu'-tus. I have no quarrel with the individual who insists that the generic name is properly *Gla-di-'o-lus*. He is quite right. But who is talking about the generic name? Not the man in the street, surely, who calls the plant *Gla-di-o-'lus* and is just as correct as the scientist. Doubtless the common people ought to have placed the accent on the *i* but they didn't. The common people call

Erythronium dog-tooth-violet, but it isn't a violet. It is, however, the common name of the plant. Are these sticklers for *Gla-di-'o-lus* going to insist that we call the queen of flowers *Rosa* instead of *rose*. Is *Polyanthes tuberosa* the *tuber-o-sa*, the *tube rose*, or the *tuber-ose*? See the point? A common name is the name (and the pronunciation commonly given the name) by the common people. If anybody likes the sound of *Gla-di-o-'lus*, let him stick to it. I'm strong for it myself!

WILLARD N. CLUTE.

ORIGIN OF CLAUDE MONNET AND BALTIMORE.

On page 149 of the October number of THE MODERN GLADIOLUS GROWER the question is asked as to where the varieties *Claude Monnet* and *Baltimore* originated. The first mentioned originated with V. Lemoine and Sons prior to 1899, in which year I purchased some of this stock direct from the originators. The variety *Baltimore* is a Groff's Hybrid and was named by me at the Convention of the S. A. F. & O. H. held at Baltimore. The variety *Claude Monnet* does not multiply rapidly. *Baltimore*, however, is a good breeder. ARTHUR COWEE.

ORIGIN OF ILLUSTRATION ON COVER OF KUNDERD'S CATALOGUE.

Referring to an article in your September issue regarding the question as to how the photo from which our front cover illustration for our 1917 catalog was made, please permit me to say: Your correspondent proceeds to describe how he thinks a fake stem might have been built up by the use of several different flowers. The facts are as stated by me in my former article. Why the building of a false spike would be necessary, or how the anthers would have anything to do in explaining the apparent mystery, is not clear. No, Mr. Patterson, there was no deception practised in producing the photo in question. Your answer is not correct and wholly ignores my statement of facts. Read again my story and try to solve the riddle from that standpoint. Your answer is the one generally given by the man who cannot explain but only assumes to be a general denial or ignoring of the facts. To deny what one cannot explain is no explanation.

A. E. KUNDERD.

Joy of the Gladiolus Grower.

BY ROSE BLAIR MARSH in *Indianapolis Sunday Star*.

OH, FOR A FORTUNATUS' PURSE! Kunderd's catalogue is before me and the very newest, dearest Gladiolus of all, *Indian Summer*, is for sale, and only one bulb to a customer and only \$25 a bulb. If it were only a watermelon perhaps some one would go partners and we could divide, but a Gladiolus corm—never.

Why is it we are never satisfied? I know that if I am content to wait long enough the coveted bulb will be mine for a price within the reach of a poor woman's pocketbook. Am I not the proud owner of blue-blooded *Princeps*, whose parents are one of American stock and the other from the Killimanjara mountain in central Africa! I thought I could not exist without it, and here I am pining for another. That is the trouble with Gladioli; they get into your blood and make you so glad, glad, glad that you want to keep on being gladder.

There is one consolation. Mr. Hoover may read the same story that I did, and declare them edible and with restrictions as to the number on hand. Perhaps it is just as well not to have too many at one time. A new Chinese cook, after the first few days of service, put before the family a dainty dish, but peculiar in flavor. The family, thinking it was a surprise in the way of some oriental concoction, ate it—but the real surprise came when they later found he had creamed the choice Gladiolus bulbs so carefully stored on the cellar shelf by the man of the house.

I wish I could convey to the reader some idea of the joy in raising the Gladiolus—the perfect flower—no odor, no pollen to offend, and when picked at the first of the blooming will last for two weeks or more, with new buds opening daily before your eyes; a constant joy and pleasure.

In Japan the girls are taught the art of arranging flowers. Their education is not complete without, and the graceful sprays of cherry blossoms and wisteria bear witness to their art, while in this country the one object seems to be a compact mass of as many flowers as can be crowded into a vase. Place your flowers in the house as nearly as possible as nature planned them in the garden; only two or three sprays, or even one of

Gladioli, with the green leaves, in a clear glass receptacle, if possible. For a low dinner piece the top blooms can be massed. These also make the ideal corsage bouquet, keeping fresh through long hours in heated rooms and smiling at you next morning, if you have not been too sleepy to place them in water over night.

Some years ago a well known writer gave me this advice: "Make your friends among your books, for if they bore you they can be cast aside and taken up again at will, without hurt feelings." Excellent advice for the winter months, but in summer, live with your flowers; there is no snobbery among them, and they cannot wound like once-loved old friends, who so often, when fortune knocks at their door, forget the former friendships.

Like begets like and association with flowers breeds gentleness and kindly thoughts for each other, and we cannot help but absorb some of their beauty into our own natures.

The gambling instinct inherent in most of us is aided and abetted by the Gladiolus grower. Right now one New York grower offers a thousand dollars to the person, either amateur or professional, who can produce a better white variety than he now has on the market.

There is the scientific pollinization of flowers, and two years ago didn't I carefully follow instructions, and didn't the colored maiden then in our employ find and burn my two precious pollenized stalks, in an unheard of outburst of cleaning the attic in midwinter? She is still in the land of the living, but her escape was a narrow one.

From the window, where I write, I look down on *War*, not the grim, hideous spectacle now before us, but the crimson-hearted, wonderful flower by that name. The grower who produced it by years of patient toil, if he never accomplished more, has performed a mission for all mankind.

In the beginning, God placed man in a garden, and if Adam had been attending strictly to the Gladiolus bed, Eve might have passed by with a whole bushel of apples and he never would have noticed her. There are modern Adams who would do well to heed my words.

Winter Protection for Roses.

As soon as hard freezing sets in it will be well to cover our roses, not so much against the cold as to protect them against the effect of alternate freezing and thawing and against the drying caused by the severe winter winds.

Tea roses, being less hardy, are best taken up in the fall, planted or heeled in boxes with moist earth and placed in a cool but frost-proof and airy cellar over winter, to be set out again in the spring in beds or borders. They should be kept slightly moist at the roots over winter, just enough so the wood will not shrivel, but not too moist, or the canes will get mouldy or the roots decay; and not too warm, or they will start into growth too early. Of course, tea roses can be potted up and put in the window of a dwelling and kept growing there all winter, but most houses are not well suited for growing roses, the temperature being too uneven and the air too dry and the plants usually grow spindly, become diseased, and covered with lice and red spiders.

The tea hybrids and Hybrid-perpetual roses are best left outdoors, cut back about a foot or eighteen inches above ground, and covered over with leaves, straw, or manure, or the earth is simply hilled up around the plants. This will carry the plants over winter usually in good condition and prevent too early a start in the spring, with a freeze back later on. The cutting back of the plants can be left until spring if desired, but the plants are usually easier to cover up when cut back in the fall. Where leaves or straw is used for covering, it might be necessary to put some poisoned wheat around the plants to prevent the mice from girdling the canes. Rugosa and Wichuraiana hybrids usually do not need any covering at all, being entirely hardy even in severe winters but even here a hilling up is of advantage, as it will prevent the winds from working loose the plants at the roots and the ice water from running down along the stems to the roots and causing decay. Climbing roses are best laid down and covered with soil or manure, so some varieties of the rambler type seem to do just as well if left where they are and not covered at all, but much depends here, on locality and age of plants. Very little pruning is needed with these roses and it is best done only every other year and then after flowering time when some of the old canes are cut out and the young canes are left to take their place.—*Farm, Stock and Home.*



One of our subscribers has kindly sent the above photograph and asked us to indicate where the proper point is to cut the flower spike and leave a sufficient amount of foliage attached to the corm to properly mature it.

We have indicated on the photograph the proper place to cut the stalk. Of course, it is understood that all the foliage might be left on the corm to good advantage, but four leaves left to mature the corm will give satisfactory results. Experiments have proved that leaving four leaves will produce practically as good results as leaving all the foliage of the plant.

Now, if any of our readers have further suggestions along this line based on longer and more extensive experience than we have had, we would be glad to hear from them. The photograph is not an ideal one to illustrate the idea of cutting, but we have done the best we could with it and comment from growers who make a specialty of cut flowers will certainly be helpful.

Gladioli at the New England Fair, Worcester, Mass.

At the New England Fair, held at Worcester, Mass., Sept. 3-6, C. W. Brown & Son made practically a clean sweep of prizes offered for Gladioli. They were awarded first for a collection of 10 unnamed varieties, 3 spikes of each. In the class of 20 bottles, one spike of each there was heavy competition and the above firm won, showing among others *Panama*, *Liebesfeuer*, *Schwaben*, *Princeps*, *El Capitan*, *Magnificus*, *Europa*, *Gigantic*, *The King*, *Mytilene*, *Scarsdale*, *Purple Glory* and *Pink Perfection*.

They were also awarded first for 12 pink, showing *America*, second and third prizes going to *Panama*.

First for 12 yellow with *Mongolian*, second and third being given to vases of *Schwaben*.

First for 12 blue with *Baron Hulot*.

For 12 white, they won third with *Rochester White*, both first and second being won by *Europa*.

A large basket with handle was arranged with *Mrs. King* and *Primulinus Hybrids* as the principal flowers and was awarded second prize.

A large display of Gladioli was also made but was disqualified as the judges decided that a display of Gladioli alone could not be called "a display of flowers." Here is a chance for a discussion. They take the stand, that a display of Gladioli is a display of a flower.

Tree Leaves Useful.

In some situations fallen leaves are a source of much trouble and labor to the gardener, but they can be made a positive asset instead of a liability if treated properly.

Select a place in one corner of the garden and as the leaves are gathered they should be dumped and covered with a layer of soil. They will decay quite quickly and a very useful soil can thus be created which can be used on heavy ground or any other ground for that matter. A quantity of this leaf mold will prove useful in seed beds and for mixing with potting soil.

As usual with the month of December, there will be a large number of expiring subscriptions. This is because it is the end of the year and volume. Some people fail to renew promptly and we are printing this little note for the benefit of those who are negligent in this respect.

Statement of the Ownership, Management, Circulation, etc., required by the Act of Congress of August 24, 1912, of THE MODERN GLADIOLUS GROWER published monthly at Calcium, N. Y., for Oct. 1, 1917.

STATE OF NEW YORK }
 } ss:
COUNTY OF JEFFERSON }

Before me, a Notary Public in and for the State and County aforesaid, personally appeared Madison Cooper, who, having been duly sworn according to law, deposes and says that he is the Owner of THE MODERN GLADIOLUS GROWER and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher—Madison Cooper, Calcium, N. Y.
Editor—Madison Cooper, Calcium, N. Y.
Managing Editor—Madison Cooper, Calcium, N. Y.

Business Manager—Madison Cooper, Calcium, N. Y.

2. That the owner is Madison Cooper, Calcium, N. Y.

3. That the known bondholders, mortgagees and other security holders owning or holding 1 per cent. or more of total amount of bonds, mortgages, or other securities are:

None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

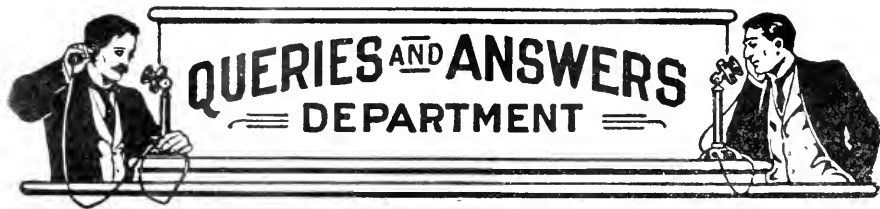
(Signed) MADISON COOPER.

Sworn to and subscribed before me this 28th day of Sept., 1917.

[Seal.] (Signed) C. HOWARD GREENE.

(My commission expires April, 1918.)

Those who have had some years' experience in growing Gladioli perhaps have noticed that some of the varieties that are apparently weak growers early in the season come on much stronger later and usually give good bloom late. This is not true of all varieties by any means, but many of them behave in just this way. While *Europa*, for instance, cannot be called a strong grower at any time, yet the bloom which will come late in the season often is quite contrary to the promise that it makes when it first starts growth in the spring.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Separating Corms from Cormlets for Storage.

TO THE EDITOR:—

I am just digging my bulblet grown stock of Gladioli and wish to know if all bulbs, no matter how small, should be separated from the bulblets, or if it is all right to let small bulbs, half inch in diameter and under, remain with the bulblets, dirt, etc., for storage and kept in a moist condition. P. G.

Answer:—All corms or bulbs, as they are commonly called, should be separated from the cormels or bulblets, and preferably at digging time. If small corms are stored with the bulblets in a moist condition they are likely to rot, or if they do not rot, they are likely to sprout and, therefore, be damaged or spoiled.

Cormels separated from the corms at digging time should be stored in moist sand, preferably clean builders' sand slightly moist, but not wet. If the cormels are allowed to cure with the corms the shell becomes hard and they are injured for germination. A moderate drying will do no damage, but they should not be allowed to dry for any length of time.

Of course many growers store their corms and cormels in paper bags or otherwise all together and do not even break off the old corms and the roots before planting time in the spring, but the above is the very best way of handling the matter.

Digging and Curing Gladiolus Corms.

TO THE EDITOR:—

Will you please give brief instructions about digging and curing Gladiolus corms before storage? V.

Answer:—Loosen the soil under the row with a spading fork, pull the bulb out of the ground by the stalk and cut off the stalk close to the corm with the pruning shears. The stalk should be cut close to the corm, not more than $\frac{1}{4}$ " long. Allow the corms to lay in the sun for two or three days, preferably on open bottom slat trays. Cover at night to protect from dew, rain or frost. After ex-

posure to the sun for a few days, if the corms are placed in an open shed or under cover for a week or two, they are ready for shipment or storage. It is, of course, understood that the old corm and roots should be removed from the new corm before shipping and this is best done after the new corm is fairly well cured or dried. If too dry it is more difficult to remove and if too green it is also difficult to remove. Just the right stage of curing, perhaps a month or two after digging, is the best time to remove the old corm and the roots.

Removing Husk of Gladiolus Corms Before Planting.

TO THE EDITOR:—

Is it good practice to remove the husk of Gladiolus corms before planting? C. M. S.

Answer:—Few growers recommend such a practice and we do not believe it is at all necessary. Someone has suggested that it is a good practice to remove the husk so as to see what condition the corm is in, but when growing on anything like a commercial scale it would be entirely out of the question to carry out a practice of this kind.

Drying up of Gladiolus Foliage.

TO THE EDITOR:—

Where the stock shows signs of drying very rapidly, in order to save the bulb do you advise immediate lifting? F. T. E.

Answer:—Usually where the foliage of the Gladiolus plant shows browning in color or drying up it indicates some disease with the corm, but not necessarily. It may be a natural ripening or owing to dry weather. Anyway it is quite proper to dig the corm when this occurs.

Catalogues and Price Lists.

Wayside Gardens, Mentor, Ohio, sent us their catalogue of hardy plants and bulbs for fall 1917. They list a very selected lot of hardy stock including Delphiniums, Iris and Phlox.

Iris Notes.

As W. E. Fryer once pointed out to us in the columns of THE MODERN GLADIOLUS GROWER, the Iris can be set any month in the year, but preferably in September or October. They are best set rather early so that they can get rooted in their new home before the ground freezes, but they can be set as late as it is possible to set them in the fall. If they are well rooted it is best to spread out the roots as much as possible, but an Iris is a pretty hardy thing anyway and will grow most any way you place it.

Do not plant too deeply. The Iris prefers to grow near the surface of the ground and if planted too deep the eyes or sprouts may be smothered. Irises are at their best the second and third years after planting. After that they usually need dividing for best results. An Iris bed that gets crowded is of no use for good bloom and will give little bloom anyway. Therefore, it is necessary to divide the Iris frequently.

Sell some to your friends. If you cannot sell them, give them away. The Iris is extremely early and a grand flower. The newer sorts are a great pleasure to those who are only familiar with the old-fashioned kinds.

Don't forget that the time to advertise is all the time, but especially from December until spring. Let us have your copy by return mail as we are again late for November but want the December issue out before the fifth of the month.

Plan your war garden for next year, but don't neglect the flower garden in doing so. If you figure out a war garden do it as an extra and not at the expense of your ornamental planting.

GGLADIOLUS Niagara, Panama, Empress of India, Pink Progression, Halley, Prince of Wales, Electra, Glory of Holland, America. *Ask for price.*

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QUALITY—ECONOMY—SERVICE

Sunnyside

Gladiolus Gardens

L. Merton Gage, Proprietor

Natick, Massachusetts

Gladioli Exclusively

GLADIOLUS BULBS

of our own growing—wholesale and retail
—best standard and new varieties:

Notice—We have as many orders as we can handle for fall delivery, but will be glad to send you our new price list as soon as printed in exchange for your name and address.

G. D. BLACK, - - - **Albert Lea, Minn.**

Surplus Stock---

WRITE NOW FOR SPECIAL
QUOTATIONS ON

Pendleton

Peace

Niagara

Pink Perfection

Halley

AND A DOZEN OTHER GOOD
ONES.

Brookland Gardens

Choice Gladioli

Woburn, - - - Mass.

The Gladiolus MRS. W. E. FRYER

Mr. Clarence Wedge of Albert Lea, Minn., who visited me when it was in bloom wrote *The Farmer* of St. Paul as follows: "I believe I have made a discovery in Gladioli. I can at least say of all the varieties I have ever grown or seen growing on the grounds of other people, nothing has approached its luxuriance of bloom, a variety which Mr. Fryer named for his wife, Mrs. W. E. Fryer.

"A row of this variety spreads out into a plume-like flower three feet wide. This is caused by unusual branching of the main flowering stem, it being common to find as many as four branches besides the main stem, growing from a good sized bulb. I take pleasure in calling attention to a flower of such unusual qualities and general value for outside planting, and it does not detract from the pleasure that it should be introduced by one of the enterprising ornamental nurserymen of our own state."

I have a large supply of this valuable variety.
Both wholesale and retail.

WILLIS E. FRYER,

Mantorville - - - Minn.

THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
Published Monthly by Madison Cooper, Calcium, New York.

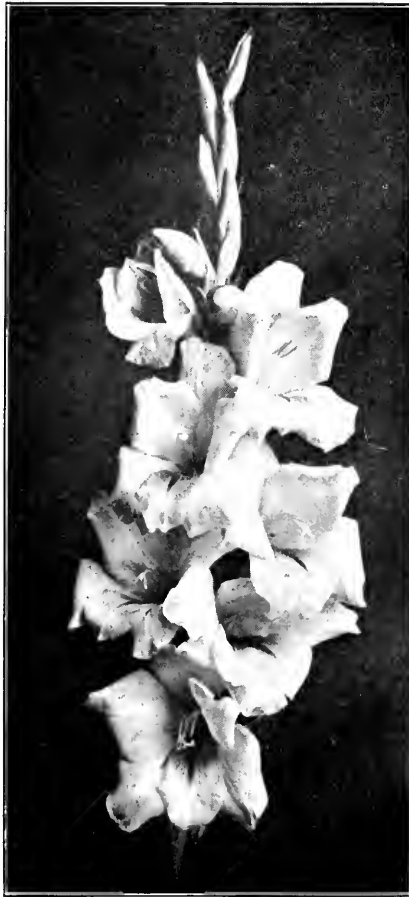
Vol. IV.

DECEMBER, 1917

No. 12

GLADIOLUS— GRETCHEN ZANG.

This variety was originated by Mrs. A. H. Austin, Wayland, Ohio. It is a large growing variety of a most beautiful soft melting shade of pink blending into deep salmon on the lower petals. Mrs. Austin describes the coloring as approaching the brilliant coloring of the *Beaute Poitevine* geranium.



Gretchen Zang has a tall graceful spike and there is occasionally a waved one. The coloring makes it especially valuable for florists' use.

Free producer of cornets. Blooms from small bulbs. Late to bloom.

First prize winner at the flower shows of the Gladiolus Society of Ohio and has been given an award of merit by the same society.

GLADIOLUS—GRETCHEN ZANG.

The Iris.

Written for *California Cultivator* by Mrs. J. J. Dean.

THE IRIS is becoming more popular every year. The formation is most interesting, the fragrance of most varieties delightful and the soft restful colors of so many are a delight to the eye, or is it the soul, for as one writer in describing the natural beauties of a certain location remarked: "There are those who see all this wonderful display from year to year and yet it has no apparent attraction to them. Clearly it is not the eye but the soul that sees."

Probably no one who has attempted to interest the public in the Iris in a commercial way but has often met with a rebuff in one way or another. "Flags are so common—they grow wild back East where I lived." Offer some large gorgeous flower and it will appeal to those people. We have often thought when we have heard someone speak almost disdainfully of "flags," that the common name should have an added charm, and we were delighted recently when reading the description of the blue flag by that student and lover of nature, Gene Stratton Porter. After describing the wonderful formation of the flower, she says: "Nature is very frank, and these marvels are spread closely over her face for any one who cares to learn. I think those who understand and really appreciate these delicate processes among the flowers never again doubt that there is a Supreme Being. The Creator said: 'And a bow shall be set in the cloud; and I will look upon it, that I may remember the everlasting covenant between God and every living creature of all flesh that is upon the earth.' So he evolved the rainbow. On the painted lily faces the botanists of early Greece saw reproduced these wonderful colors, and so they named the plant 'Iris,' the rainbow.

"Because the sky is blue, eternal and never changing, men have adopted this color to express friendship, which also should be eternal and never changing. True blue is dear to all hearts and conveys an express meaning; so again these wonderful flowers are baptized with truth. And as if no honor might be lacking, to the blue is added 'flag.' Never was other flower more highly honored in its naming. Sometimes beautiful plants and vines are insulted by scientists applying to them careless, contradictory, and incongruous terms. Here is one

embarrassed by riches both in its scientific and common name. Think what his flag symbolizes to a man! It means so much that for it he severs the dearest ties of earth, leaves a home of comfort and faces untold hardships, exposes his body to sickness, wounds, and many forms of death. For it he sacrifices everything else on earth, yielding with smiling lips life itself.

"So when the slender, exquisite leaves of the Iris waved on the free winds of the marsh with the abandon and grace of the flag, some one caught the resemblance, and to the symbol of eternal truth was added that of liberty, and the rainbow lily became the blue flag, the true flag."

The West does not seem to be keeping pace with the East in the cultivation of the Iris, and it seems the more strange when we consider that our climatic conditions are much better suited to their requirements, particularly the fine large Asia Minor and Eastern species and their hybrids. It is doubtful if there is another location where they grow to greater perfection, producing fine large rhizomes with no root rot trouble; no drenching rain to ruin the blossoms; and an unusually long blooming period. Some varieties too bloom more than once; most of the true Germanicas make three crops of bloom; in early spring and late spring or early summer and again in the fall or early winter. By proper selection we can have Irises a greater part of the year.

One of the most valuable for Southern California, as well as for locations that are not so mild, is the *Unguicularis* group, more commonly known as *I. stylosa*. They are natives principally of Algeria and Greece, are delicately beautiful and possess perhaps the most delightful fragrance of the whole genus. They have a pretty grassy evergreen foliage, two feet in length in some varieties, shorter in others, and a well developed clump will occupy a space some two to three feet in diameter. This Iris can scarcely wait for the cool weather, and we occasionally see blossoms in the summer, but usually by September it can wait no longer if watered and then flowers at more frequent intervals until in December or January it is at its height, and a large clump will be a mass of bloom nestling among the foliage. The stem is very short, but the perianth tube is very long,

six inches and sometimes even twelve inches in length, so that answers for a stem. In gathering it is best to gather just before the flower opens, grasping the tube firmly and pulling gently so as not to pull up the immature buds which will develop later. They come in various shades of lilac, purple and white, and have a central band of orange or yellow. The markings of some are much finer than others. Both plant and flower resemble somewhat many of our native Californian Irises although the flowers average somewhat larger in most varieties. After January they gradually decrease until March or a little later. Some varieties, *Speciosa*, for instance, do not come into bloom so early and consequently bloom later. It does not seem possible that anyone who cares for flowers would not like this Iris, and the fact that it blooms in mid-winter when flowers are scarce, makes it so much more valuable. It is a fitting companion to the violets, and the two combine very nicely for table decorations.

Again in our climate some of the Asia Minor Irises of the Germanica type come into bloom in March, others in April and May, and it is the last of June before they are all gone.

During July and August we do not expect to see many Irises as that is their natural resting time. In the fall and early winter, however, quite a number bloom.

We have referred only to the large flowered Germanica type as these are the most popular perhaps of the genus, and the pretty *Stylosa* which because of its blooming habit is doubly valuable.

An Appropriate Christmas Gift.

What could be better than a box of Gladiolus corms nicely labeled and sent direct from the grower to your friend as a Christmas gift, as advertised in this issue? There is just one thing that could be better and that is to accompany this gift with a year's subscription to THE MODERN GLADIOLUS GROWER. This will keep up your friend's interest in the Gladiolus the year through and remind him (or her) of your thoughtfulness every month in the year. Order now. The subscription rate advances January 1st and you can also extend your own subscription until January 1st at the present rate for as long as you care to. If you send in a subscription for a friend along with your own renewal for three years or more, we will accept the combination at the rate of 50c. per year.

Wintering Dahlia Bulbs.

Dahlias are popular farm flowers. They grow readily from seeds, blooming the first season, with a fair proportion of choice flowers from the ordinary grade of seeds, and they can be increased rapidly when fine specimens are produced. Then the tubers can be easily kept over winter in any cellar or cave, or in a room where they will not freeze.

Dahlia tubers will not stand any freezing, but the tops should be killed by frost before they are dug. Dig carefully so the tubers will not be loosened from the stalks, for without a part of the stalk the tubers are valueless. Cut the stalk off so several inches is left attached to the bulbs and they will be much easier handled.

Pack the tubers in a box of sand or dust as soon as you dig them. If you wish to label each tuber, fasten the label to the stalk so it will be above the soil in which they are packed. If you have a number of one kind it is best to separate the sorts with a piece of cardboard and label only one of the plants in each bunch. Some label only the colors, and group all the shades of each color, thus saving labeling, and enabling them to plant in color groups as well as if fully labeled.

It is not necessary for the soil or sand to be kept moist, but slightly damp will make the bulbs keep more perfectly. If too wet they will start to grow if the cellar is warm enough to permit it, or they may rot. Dust, dry soil or sand will cause them to shrivel a little but does no particular hurt except making them a little slower in starting.

Do not save any detached tubers, for no tuber without a piece of the stem will grow, as the eyes are in the old stalk just where the tubers attach to it. In dividing for planting split the stalks so each tuber gets a piece.—L. H. COBB in *Rural Life*.

"Tall Bearded Iris."

Walter Stager, Sterling, Ill., sends us his booklet entitled, "Tall Bearded Iris." This is not a catalogue but a booklet of descriptive matter. The Iris in poetry and literature is given a prominent place at the beginning of the booklet, followed by classification of species, structural characteristics and general suggestions on planting, culture and propagation. The final chapters consist of the use of the Iris as a garden plant and for cut flowers with the names of a few varieties.

Dates of Blooming in 1917.

[Alverstoke, England.]

NAME	Planted		Bloomed		NAME	Planted		Bloomed	
	Height on June 1st in inches.	D.M.	Height ft., inches	D.M.		Height on June 1st in inches.	D.M.	Height ft., inches	D.M.
*4 Afterglow	16.4	20	16.8	3.3	8 Maculatus	7.4	10	29.7	4.0
7 Albion	7.4	7 ³ / ₄	7.8	3.0	Marie	15.3	19	4.8	4.0
7 Alice Tiplady	7.4	20	1.8	3.3	7 Mary Fennell	16.4	11 ¹ / ₂	9.8	2.9
7 Angola	7.4	4 ¹ / ₂	1.8	3.7	7 Mary Pickford	16.3	15	14.8	3.3
7 Anita	7.4	11	28.7	3.5	12 Master Wiesse	6.3	14 ¹ / ₂	3.8	5.0
2 Ariadne	7.4	16	31.7	3.2	9 Mephisto	16.4	14	5.8	4.0
2 Ariel	7.4	12 ¹ / ₂	4.8	3.0	8 Misanthrope	31.3	9 ¹ / ₂	7.8	3.6
6 Banshee	7.4				9 Mozart	13.4	12	21.1	3.6
8 Belle Alliance	1.3	15	29.7	4.6	Mrs. Brewster	13.4	13	3.8	3.0
3 Berkshire	13.4	9	9.8	3.5	Mrs. Francis King	31.3	13	6.8	4.2
7 Blue Isle	1.3	13 ³ / ₄	6.8	4.6	7 Mrs. Frank Pendleton	16.4	14	9.8	3.8
7 Blue Orchid	1.3	13 ¹ / ₂	6.8	4.0	6 Mrs. J. M. Skittery	13.4	16	12.8	3.4
7 Butterfly	7.4				6 Mrs. Robert Wordsworth	16.3	13	24.7	3.8
7 Canopus	7.4	9 ¹ / ₂	2.8	3.2	7 Mrs. W. E. Fryer	31.3	9 ³ / ₄	26.8	
7 Cappella	7.4	15	5.8	4.0	12 Murillo	6.3	15	6.8	4.6
8 Concolor	9.4	10 ¹ / ₂	1.8	4.3	7 Myrtle	13.4	15	21.7	3.0
8 Couronne Bleue	1.3	12 ¹ / ₂	28.7		8 Myrtle Prince	16.4	11 ¹ / ₄	15.8	3.6
8 Duc De Massa	1.3	11	25.7		13 Nezinscott	16.4	18	1.8	3.6
6 Duke of Richmond	10.4	17 ¹ / ₂	13.8	4.8	9 Oberammergau	16.3	14	27.8	4.0
6 Early Morn	7.4				Panama	16.4	21	22.7	3.10
1 Early Sunrise	10.4	15 ¹ / ₂	22.7	3.11	5 Paris	12.4	11	28.8	2.6
3 Eldorado	13.4	8	7.8	3.0	4 Peace	16.3	17	21.8	5.0
7 Elberton	7.4	14	24.7	4.5	8 Phoebe	6.3	14	2.8	4.0
8 Emile Gebhart	15.3	12 ¹ / ₄	2.8	3.0	8 President Braun	12.4	15 ¹ / ₂	17.8	3.0
8 Erectus	7.4	11 ¹ / ₂	29.7	3.6	8 President Magnaud	10.4	9 ¹ / ₂	27.8	3.3
9 Erwin Mayer	31.3	14	21.8	3.6	Pride of Hillegom	16.4	17	2.8	3.6
7 Firefly	7.4	12	22.7	3.4	7 Primunella	9.4	8	7.8	3.3
8 Forain	31.3	16	24.7	3.5	Prince of Wales	10.4	21	22.7	3.10
8 Fragonard	31.3	17 ¹ / ₄	28.7	4.0	8 Quasimodo	12.4	10 ¹ / ₂	2.8	3.4
8 G. A. Kwijk	1.3	8 ¹ / ₂	30.7	4.0	7 Regulus	9.4	10	1.8	3.6
8 General Stoessel	10.4	14	6.8	2.6	12 Rev. Ewbank	6.3	16	23.7	4.3
1 Glory of Noordwijk	16.4	12 ¹ / ₂	6.8	3.0	7 Rigel	9.4	12	11.8	3.4
7 Gold Drop	7.4	6 ¹ / ₂	9.8	4.8	8 Roi Leopold	10.4	18 ¹ / ₄	25.8	3.6
7 Golden Gate	7.4	11 ¹ / ₂	30.7	2.9	Rose Queen	16.4	17 ¹ / ₂	21.8	
11 Golden King	13.4	15	13.8	4.0	Safrano	13.4	18	14.8	3.9
6 Golden Girl	7.4	6	10.8	3.3	8 Salmoneus	9.4	10	21.7	3.9
6 Golden Measure	13.4	14	18.8	3.6	Salmon Excelsior	10.4	13	24.7	3.9
12 Halley	10.4	15	18.7	3.9	8 Saphir	6.3	10 ¹ / ₄	25.7	
5 Helen Goldman	13.4	8	17.8	2.6	9 Schwaben	12.4	12 ¹ / ₄	18.8	3.0
8 Heliotrope	1.3	10	27.7	2.6	6 Sea Mouse	14.4	18	22.8	3.6
9 Hohenzollern	16.4	15 ¹ / ₂	18.8	3.0	7 Sedan	9.4	14	30.7	2.0
9 Herman Sielcken	16.4	14	3.8	3.3	7 Seneca	9.4	13	26.7	3.2
1 Incontestable	16.3	13	24.7	3.9	7 Silvis	9.4	9	14.8	3.0
Jean Dieulafoy	16.4	16	28.7	3.0	7 Sirius	9.4	8 ¹ / ₂	5.8	2.6
8 Jules Toussaint	1.3	12	7.8	3.0	7 Spica	9.4	12	2.8	2.5
6 King of Gladiolus	10.4	17	8.8	4.6	8 Tolstoi	10.4	14	18.8	4.0
12 King of the Blues	1.3	11	24.7	3.0	8 Tyran	31.3	13	9.8	4.0
Lacordaire	16.4	14	6.8	3.3	8 Valmy	10.4	14 ¹ / ₄	7.8	3.4
8 Lemoine	1.3	16	26.7	4.6	7 Vega	9.4	12 ¹ / ₂	29.7	4.2
6 Lady F'Cecil	12.4	16	9.8	3.6	8 Vierge Lorraine	16.3	10 ¹ / ₄	25.8	4.0
6 Letitia	16.4	16	7.8	4.0	Vivid	15.3	11	2.8	4.0
Liebesfeuer	16.4	15	5.8	3.6	War	16.4	12 ¹ / ₂	7.8	3.3
Lily Lehmann	16.3	13	29.7		7 White Glory	16.3	13 ¹ / ₄	1.9	2.8
7 Linton	7.4	16	26.7	3.7	9 Zeppelin	16.4	11 ¹ / ₄	16.8	3.6
10 Loveliness	13.4	19	14.8	3.9					

* The number preceding the name denotes the raiser, as follows: 1, Alkemade; 2, Barr; 3, Cowee; 4, Groff; 5, Hoeg; 6, Kelway; 7, Kunderd; 8, Lemoine; 9, Pitzer; 10, Zeestraten; 11, Black; 12, Velthuis; 13, Childs.

Planting could not be started as soon as in previous years owing to the late frosts, and it was further delayed in consequence of wet weather. The dates of blooming are from nine to fourteen days later than last year.

SMILAX.

MRS. AUSTIN'S TALKS.

A FEW LESSONS.

For the last six or eight months the weather in this vicinity, northeastern Ohio, has been a safe gamble. In the dry districts, when threatening clouds shadowed the skies to inky darkness and gave every promise of a flood of rain, the anxious Gladiolus grower could safely wager his last cent that not a drop would fall on his thirsty fields, while in the deluged sections a grower had good reason to become apprehensive when a cloud the size of his hand appeared on the horizon.

One might call it a year of warnings or lessons. One of those seasons when experience decides to teach the new growers that there are many unexpected obstacles to prepare for and overcome before success will smile upon him, and at the same time to jog the memory of older ones. It brought to mind a number of lessons learned from experience in our own work and in observing the methods, and some mistakes, of other growers.

One of the Springtime lessons was to get the black bulblets planted early while the soil was moist so that the shell could soften and start into growth early, for if planted late and dry weather came, they would lie in the soil until late rains caused them to sprout, which would be too late to make size, and frosts destroy the tender growth.

A (dry) summer warning was to give the most intensive cultivation or lose the crop. The cultivator had to be kept going both to keep the weeds out and the moisture in. The work to be done in such a way that the soil would be thrown upon each side and in between the bulbs forming a complete dust blanket. Such cultivation is done more thoroughly with a walking cultivator which, of course, makes more work but the extra growth is worth it. General cultivation between rows is all right for a season of fairly good rainfall but during drouth frequent stirring close to the row helps put on the size.

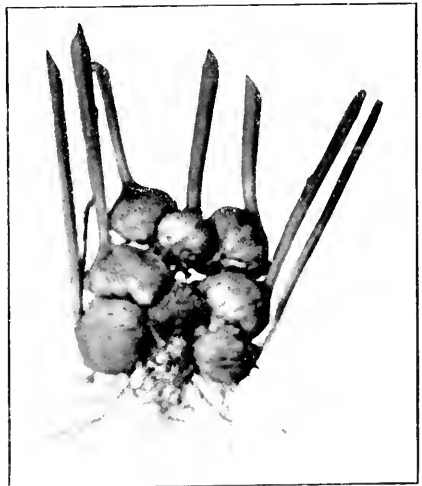
Early planted bulblets can be dug early, and one important lesson learned was to do it, getting them out of the ground in late August or early September. Although green and still growing there would be less loss of the small bulbs in the soil and no injury to them. Dug early and put in a warm airy place they would cure quickly and be stored where they were to stay until cleaned.

With the bulblet stock curing, the next step was the digging of larger bulbs, and there were as many lessons to learn as there are variations of weather. How to get them harvested in a rainy season before grim winter locked the soil was a particularly serious proposition, and we once happened to visit a grower when he was experiencing that special difficulty.

The grower worked desperately and the helpers thought they did. Snowstorms came, followed by heavy freezing and days of mud. They tried forking but it seemed dangerously slow and to save time plowed them loose, and right there came another lesson, for the plow had been set too deep. It raised so much of the soil with the bulbs that they could not separate from it. The tops broke off and bulbs and soil were gathered up together and heaped in the trays.

A storage lesson was to shake and toss with a fork, the bulbs from the soil when putting them into the trays from the wagon leaving the dirt and loosened bulblets in a pile until they could be screened. The large bulbs free from soil would soon be ready for cleaning and early shipping.

MRS. A. H. AUSTIN.



This shows seven new corms resulting from division of a single old corm. Can anyone tell us if these divisions will be as satisfactory for blooming as young stock grown from bulblets? Our own experience is that these multiple divisions are more than likely to come blind when planted. Let us hear from others.

New Peonies from Seed.

There are a great many lovers of that old favorite, the Peony, who apparently do not know that new beautiful varieties are easily grown from the seed. The experience of Mrs. Austin Powers of Whiteside county, Illinois, in growing seedlings, will show the possibilities open to anyone with a little time and patience to give to the work.

Seven years ago, while working around a bush of the old common white Peony, Mrs. Powers discovered several tiny plants coming up in the sod at the edge of the old clump. She dug them up and found the seeds still attached to the roots, so that the little plantlets were easily identified as Peony seedlings. Curious to know what they would produce, she planted them, tended them carefully, and reset the plants as they became larger. The fourth year after the discovery of the seedlings she was rewarded by seeing one plant produce a bloom; and the next year several others began to bloom.

The new varieties were all of some shade of pink, from the most delicate salmon to a dark pink, almost like the old-fashioned red Peony. They ranged from beautiful singles to immense double forms nearly nine inches in diameter, and all from a perfectly white parent. Every one of them was well worth perpetuating. A local florist and nurseryman pronounced one of them a really splendid Peony. Another set of seedlings has since been found under the same white parent, but none of these have yet reached the blooming age. A year ago a large number of seedlings were discovered under various ones of the original seedling. These have been set out as before and the result is anxiously awaited.

The reader must not expect to find seedlings under every Peony bush, for some of them do not seem to produce seed. The seeds do not all grow the first year, some of them failing to germinate until the second year, or possibly even later. It will be about four years before the seedlings can be expected to bloom, although with good care they may bloom the third year. Mrs. Powers' experience with these seedlings is only an instance of what any Peony lover could do by exercising a little care and patience. The result will be very interesting to say the least, and there is a possibility of making considerable profit by the production and introduction of some choice new varieties. Many neighbors to whom Mrs. Powers has shown these flowers have declared that they never knew of Peonies producing

seed in this way, and even one of the local florists would not believe it to be a fact, and had never before seen a variety bearing single blooms. In fact it was just a chance discovery in this case, but one which when followed up has proved to be of great interest.—L. F. P. in *Successful Farming*.

Manure Can Replace Costly Fertilizers.

Can barnyard manure be worth \$8 to \$9 a ton for use on farm crops? At present prices for commercial fertilizers, it has had this value in tests conducted by the Ohio Agricultural Experiment Station.

Eight tons of manure reinforced with 320 pounds of acid phosphate has been as effective in increasing crop yields as the same quantity of acid phosphate mixed with 480 pounds of nitrate of soda and 260 pounds of muriate of potash, in tests covering 20 years at the experiment Station at Wooster.

Nitrate of soda now costs nearly four cents a pound, and muriate of potash 20 cents. At such prices the eight tons of manure has had a replacement value of at least \$70.

Every pound of manure saved and used with the utmost economy will relieve the fertilizer situation this year and put crop yields on a higher level.—*Florists' Exchange*.

Moving Flower Plants.

J. O. G., Pine Co., Minn., writes: "I have some Peonies, Roses, Lilies and other flowering plants that I wish to move this fall, and would like to know if it is safe to do it and, if it is, what is the best time to do the moving. Can I break up the Peonies and set several colors in one bunch, or is it best to leave them as they are?"

One of the best times for moving Peonies, Lilies, Iris and nearly all herbaceous plants is early in September or late in August, as soon as the heat of mid-summer is past and the days begin to be cool and the weather moist. Herbaceous plants include all of those that die down to the ground in the close of the season and start from the root in the spring. Woody plants, such as Roses and flowering shrubs, cannot be moved very safely in our climate except in spring.

You can readily divide your Peonies, and very likely the other perennials, when you move them this fall. I would not set the peonies closer than two feet apart.—*The Farmer*.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
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Special favors to none, and a square deal to all.

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Growers are invited to contribute articles or notes over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.

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Vol. IV.

December, 1917

No. 12

*Gla-di'-o-lus is the singular of Gla-di'-o-li.
Correctly pronounced with accent on the syllable "di."*

"Not True to Name."

Your editorial under this heading in the September number came at a very opportune time and will, I trust, help to impress on growers the necessity of care in lifting and storing this year's crop.

The trouble you speak of is no doubt caused by scarcity of help, but do growers seriously "rogue" their stocks when in bloom?

One experiences the same trouble with seed potatoes, but the prices of different growers soon tell their own stories, and one does not take long to learn that the term "cheap and nasty" applies to seeds as well as to other things.

If true and clean stocks are required one must be prepared to pay a fair price and to expect to get them at any other, is asking for trouble and disappointment.

As to handling stock after it has been received—even in the handling of one's own grown stock accidents will happen. This year my *Bordeaux* came up true to label, but it also came up in a row of *Karl Lutz* and in two rows of *Golden West*. How the mixture was made, no one knew, but it was quite certain that

some *Bordeaux* was split over the other two varieties.

I have always found growers, with two exceptions, ready to make good any failures or mistakes in goods supplied whether in seeds or bulbs. It is to the interest of the grower to have a satisfied customer.

SMILAX.

A Flower Show Suggestion.

It is suggested that when the American Gladiolus Society gets up another prize list for an annual show that a little more attention should be given to descriptions and designation of the color classes. For instance, in blue, mauve, purple, salmon, pink, etc., mention might be made of some varieties that clearly come in the different classes like *Baron Hulot* for purple or dark blue; *Badenia*, *Blue Jay* or *Mary Fennell* for mauve. It might be well also to designate in what classes such varieties as *Empress of India*, *Negerfurst*, *Goliath*, etc., should be placed.

Also should there not be a separate class for the salmon or orange varieties such as *Orange Glory*, *Pride of Goshen*, *Halley*, *Prince of Wales*, *Hohenzollern*, etc.? If some well known varieties were men-

tioned in each color class, then everybody would know in what classes to show his varieties.

There seems to be quite a difference of opinion about colors, especially in purple, blue, salmon or pink. *America*, for instance, is called by everybody a light lavender and yet it is used to compete in the pink class. I believe a little more description would be very helpful.

C. ZEESTRATEN.

Late Digging of Gladiolus Corms.

Owing to bad weather the editor this year was very late in getting his Gladiolus corms out of the ground. Some were dug as late as the middle of November. It was noticeable that the corms dug last had cormels of extraordinary size and development and it would seem that those who want to get all the increase possible from a new rare variety should leave the corms in the ground as late as possible in the fall.

Here is another suggestion: It seems apparent that when the first real killing frost comes, it stops all growth of the parent corm, but it does not seem to stop the growth of the cormels. The cormels seem to keep right on growing at least for a time. Perhaps some of the older and experienced growers can tell us something definite about this.

MADISON COOPER.

One of our correspondents in England writes with the suggestion that we should have an article prepared entitled, "The Striking Novelties of the Year." He refers, of course, to the Gladiolus. Such an article would surely be interesting to all of us, but we would doubtless all pick a different list. At the same time some of the novelties are so distinctive that perhaps they would be selected by most any of us. Not all varieties which win prizes at flower shows can be called representative varieties. Often a variety will win a prize through sheer quality of bloom and not from any extraordinary merit of the variety as a variety. This has been the

case in a number of instances which we recall at the moment. The fact that a variety wins a prize once or even more than once, does not necessarily mean that it is an extra good thing in itself. Perhaps it only means that the person who grows it is an expert in his line. The variety which is really meritorious must be grown by a number of different people and under different conditions to prove that it has real merit.

Every Gladiolus grower should have at least a few *Primulinus Hybrids*. Some of them are extremely beautiful and there is a great variation of shades and variety of form to them. They have a distinctive form although the form varies greatly, too. The colorings and mottlings and the yellow and orange shades are very pleasing to those who are especially fond of these colors. Of course there is as much difference in *Primulinus Hybrids* as there is in the other species of Gladioli, but one can select and sort so as to propagate the best only, the same as with other varieties. They may be grown in mixture or with the different varieties selected as desired.

One of our subscribers who was greatly interested in the articles on Gladiolus growing in the South, suggests that some of our friends who have had experience in California might say something about the possibilities in that tropical climate. We would be glad to hear from anyone who has had experience and who will tell us what the results have been.

The readers of THE MODERN GLADIOLUS GROWER will confer a favor on the Editor by sending in clippings from their local papers relating to the Gladiolus. THE MODERN GLADIOLUS GROWER aims to collect into one publication all of the available facts and information concerning the Gladiolus which appears in print and you can help us as suggested by sending in items which come under your eye from time to time.

WAYSIDE RAMBLINGS.

RELIABILITY. — "AS OTHERS SEE US."

I was looking at my Gladiolus beds a few days ago, and the failure of some of my new purchases recalled to my mind some notes, made by an Australian on some new English Daffodils. These included:

"What a flower to bloom at £1 4s.!"

"What poor flowers to have been cracked up as something extra fine in the catalogue when they were first distributed!"

"Has not yet flowered."

The same remarks might be applied to some of the recent introductions of Gladioli, whether American, Dutch, English or French. But what can be said of those which have failed not only to bloom, but even to grow at all! When you find a failure surrounded by strong healthy neighbors, it is rather a shock to be told that the failure is due to bad cultivation and lack of moisture! Such was my experience last year. This year I sought for the source of the trouble and on lifting the bulbs and examining them in the light of the information and Fig. B on p. 32 of Vol. 3, THE MODERN GLADIOLUS GROWER, I had no difficulty in arriving at the true cause of the failure.

Again some novelties appear in a catalogue one year and disappear the next, why? That some novelties are insufficiently tested before being put on the market is well known, but growers should be more careful of their reputations for reliability, and hesitate to rush a novelty onto the market. How many firms, after extensively advertising a novelty, would decline to quote for it on the ground that it had not come up to expectation, and would have to be subject to further trial, before being placed in their catalogue?

I would suggest that where novelties are discarded by the introducers some note of the fact should be made in a subsequent catalogue.

G. C.

GROWING EXHIBITION GLADIOLI.

TO THE EDITOR:—

In a recent number of your bright little magazine I came across some reference to a former article regarding my instructions as to growing giant or, exhibition Gladiolus blooms. It seems that one of your readers understood from the cultural notes in my 1917 catalog that highest forcing culture was our general

field practice. I do not think that any careful reader can find any such statement in our cultural suggestion, nor would any such method be possible on such a large basis as we grow, for both the reasons, that the expense would be prohibitive and the quality of bulbs be injured for the succeeding year. As is well known we do not grow for cut or show flowers but grow with the one end in view: to supply the most exacting private growers with the best bulbs possible. Under the extreme forcing cultural methods, which I gave for those wishing to grow prize or giant blooms, there is no doubt the bulbs would be injured. High class culture in another sense, that of growing ideal bulbs for the following year, would not necessarily impair the value of the bulbs. Such high class culture would not, however, be the forcing method recommended for growing giant flowers, but rather would be the growing in a normal soil of high fertility and include very frequent and thorough culture and the best possible storing and handling of the crop. It is true that bulbs grown in this manner, namely, in a first class soil and given the best of culture in every way throughout the season would give an increased size of bulb, or corm, and a very largely increased quantity of high quality cormlets. The fields on which our own stock is grown are only of fair average quality of sandy loam. We use no fertilizers at present but prepare our soil only by seeding to a heavy stand of oats in the fall preceding the use of the fields for the Gladiolus. I might add that a large part of the credit for the high quality of our bulbs is due to the inherent vigor of the new strains we have produced. My advice to the commercial grower of bulbs, as well as other crops, is, cultivate often and thoroughly. To the grower of show flowers; give intense forcing culture. The former method produces quality bulbs, the latter the prize blooms.

A. E. KUNDERD.

SELF-FERTILITY OF THE GLADIOLUS.

I notice in the October issue of THE MODERN GLADIOLUS GROWER something about Gladiolus spikes covered with cheese cloth as to whether or not they are self-fertilizing. It is well known that some crosses of Gladioli will not produce seed. It has been my experience that most seed bearing parents are self-fertilizing. In fact, I have never discovered anything to the contrary, but have never made any extended tests along this line.

E. T. BARNES.

ORIGIN AND IDENTITY OF VARIETIES

Regarding Mr. B. Hammond Tracy's article in the October number of THE MODERN GLADIOLUS GROWER, page 149, as to the origin of some varieties, he writes: "Mrs. James Lancashire and Rouge Torch were both segregated at Cedar Acres." Mr. Tracy's article was in answer to an inquiry in the August issue of THE MODERN GLADIOLUS GROWER as to the origin of the above varieties.

For my own part I fail to see how the word "segregated" answers the question as to the origin of these varieties. Did Mr. Tracy by the result of his own hybridizing note these varieties and segregate (separate) them as being worthy of a name? If he did then the origin is with him. Or did he note them among a mixture of some seedlings he had bought and segregate (separate) them from the others? In this case, if he is able to remember of whom he bought them, this person, I should think, would be the originator, and the question as to the origin would thus be traced.

I would like very much myself to know the real originator of Mrs. Lancashire as it is a very fine variety.

Could Mr. Tracy throw any light upon the origin of two varieties which he had labeled, in his very attractive display at the Bronx Park show this fall, *Amethyst* and *Sunset*? There was quite a lot of these, I should judge about twenty or thirty spikes of each, in baskets or vases.

I especially noted these varieties and examined them closely and they are, even to the minutest markings and coloring, similar to two varieties I have been growing for about four years. *Sunset* is exactly like a variety I have, called *Bennice* or *Black's No. 111* and *Amethyst* like *Black's No. 114*. These I purchased of Mr. Black, then at Independence, Iowa, or Mr. Woodruff, I forget which. Mr. Tracy, I should think, could easily tell whether these originated by his own hybridizing or whether he purchased them and of whom, and find out how the confusion of names originated. This confusion of names, I think, is detrimental to the business for several reasons that could be mentioned.

In my past five years' growing Gladioli I have wasted considerable time and money only to find out that:

Faust (from Holland), *Harvard* and *George Paul* are the same. Mr. Cowee also has a *Faust* which is an entirely different variety from *Faust* (as grown in Holland.)

Madam Lemoine and *Easter* are the same.

Old Rose, *Chocolate Drop* and *Purple Prince* are the same.

Waterloo and *Taconia* are the same.

Velvet King same as *Wm. Mason*.

Autumn Queen the same as *Lillian*. (Beautiful variety by the way.)

Grenadier and *Mrs. Scott Durand* the same.

Baltimore is the exact double of *Hohenzollern*.

The variety Mr. Tracy sells as *Rouge Torch*, as far as I can see, is just like a variety Mr. Black sells under the name of *Beulah* or *Black's 113*, and I have seen it cataloged in one catalog (I forget which one) as "*Rouge Torch* (B. 113)."

B. F. STALNAKER.

CURING GLADIOLUS CORMS.

I am drying my Gladiolus corms in a colony brooder house. The coal burning colony stove is in a room 8x8 ft. with portions of the window openings covered with cotton cloth. So far I can see no reason why they are not going to cure perfectly, and it is very much easier to keep the fire going than to watch the sun and be obliged to carry the trays out and in between showers.

LESLIE CRANE.

Note by the Editor—

Mr. Crane's plan seems to be a good one, but we should advise caution in drying in this way, to not overdo the work, as it would likely injure the vitality of the corms. Besides, nothing will take the place of direct sunshine. To avoid carrying trays in and out we use a waterproof canvas for covering the trays at night and during rainy weather.

STORING DAHLIA TUBERS.

Note one of your readers has had trouble keeping dahlia bulbs. Dig the toes, cut the tops off at once, remove only the excess dirt and place on the cellar floor. Cover completely with dry dirt or dust. Three weeks before planting water once sufficiently to start growth so that division will be easy. I have carried through hundreds of clumps every year in this way without the loss or shriveling of a single toe.

PAUL L. WARD.

ROOT GROWTH ON NEW CORMS.

I thank Geo. S. Woodruff for putting me right on this point. On reading his communication in the June number, I lifted one or two corms which had bloomed, and confirmed his statement. G. C.

An American Boy's Patriotic Appeal.

A letter from B. Hammond Tracy, Jr., to his father, B. Hammond Tracy, of Wenham, Mass., strikes a note of patriotism which should be instilled in the hearts of all true American boys and we are pleased to print this letter with Mr. Tracy's permission.

Mr. Tracy, Jr., left for France last February with the Harvard unit. He was with section 7 at Verdun, where he attained his majority. Later he was in the Champaigne district and encamped on the ancient battlefield of Attila, the Terrible Hun. The letter which we print below was written at this place. He is now with Section 3, Armee d'Orient, on the Macedonian front:

"Dear Mother and Father:

"Your letters came to me yesterday, and now I wish I had said nothing about aviation until nearer the end of my ambulance service. I am sorry you take aviation so hard, for the mortality is only 8 per cent. more than that of the infantry. The whole argument amounts to this: I am first of all of military age and must take up some service, now that we are at war; am physically fit for aviation, while there are millions over and under age available for ambulanciers and camions. Do you wish me to be called an ambuscée, when I come home? And that is what they call us here, now that America is at war. The air life is a bit more dangerous, but death comes from a little bullet and is quick and clean. One is not blown into infinity by marmite or other high explosives which leave unbelievable holes in one's body. One fights man to man in the air.

"I must do some military duty and my six months' experience and my knowledge of French are of value to those whom I am trying to help. After all, if I am not to survive this war, what difference does it make how I go about it? No one wants to come home more than I do. No one is more fed up on this war than I am, but my wishes and your wishes are almost nothing. Our sorrow is like sunshine when you think of the sorrow caused by the death of the 7,000,000 men who have died since August, 1914. One learns to feel that death is easy after watching these Frenchmen die.

"And are you, my mother and my father, going to refuse to sacrifice one son, when millions of others have done far more? Could you have followed me through some of the places I have been the last week you would have infinite confidence in my luck. Something more than the power of a piece of gold is guiding me through these bursting shells. J— is going into aviation and his mother has no dear little sisters to take his place. Perhaps I am wrong to urge you to let me go on, but I have all the papers made out and take the medical examination soon. In America we are taught that one's country comes first, and am I now to throw over the legacy of the revolution? In France an aviator is considered worth 1,000 men. Can you imagine my being worth 1,000 men? However, this is no time for joking. Only think of the millions who have lost more than I can ever be, of mothers who have lost several sons, as well as their husbands, and their daughters ruined by German officers, and of husbands fighting, never knowing the fate of their sons, wives and daughters. God is watching me, and if anything should go wrong, sorrow a little and thank God that you

could sacrifice one so dear to you in the cause of right. When you have decided, write to me at once. All my plans shall stop until I hear again. Let B— read this letter. I do hope he will never be called to leave America for this God-forsaken country.

"This is reconquered territory and no one is living above the ground. Wheat fields are the only gardens, with patches of radishes and lettuce about. Weather is wonderful.

"Once more let me assure you that I realize how much I owe to you and dad, and will come at permission—come home only to return, for I could never stay away from this war now until it ends.

"HAMMOND."

Gladioli at Connecticut Fair.

At the Connecticut fair which opened Labor Day at Hartford, Conn., there was a large exhibit of flowers among which Gladioli held a prominent position.

The Silver Cup for the largest and best collection was won by C. W. Brown & Son, of Ashland, Mass.

The following are the awards with the names of the varieties shown:

25 spikes *America*—E. M. Smith, East Hartford, 1st; C. W. Brown & Son, 2nd.

25 spikes *Mrs. King*—E. M. Smith, 1st; C. W. Brown & Son, 2nd.

25 spikes *Mrs. Frank Pendleton*—C. W. Brown & Son, 1st; E. M. Smith, 2nd.

20 spikes *Pink*—E. M. Smith, 1st; C. W. Brown & Son, 2nd.

20 spikes *Scarlet*—F. H. Pond, Bristol, Conn., 1st, with *Princes*; E. M. Smith, 2nd, with *Princes*.

20 spikes *White*—C. W. Brown & Son, 1st, with *Rochester White*; N. Nelson, Hartford, 2nd, with *Glory of Holland*.

5 spikes *Crimson*—C. W. Brown & Son, 1st, with *Hazel Harvey*; Mills & Co., Mamaroneck, N. Y., 2nd, with *Mrs. Watt*.

5 spikes *Scarlet*—C. W. Brown & Son, 1st, with *Liebesfeuer*; E. M. Smith, 2nd, with *Tavistock*.

5 spikes *Yellow*—F. H. Pond, 1st, with *Canary Bird*; C. W. Brown & Son, 2nd, with *Mongolian*.

5 spikes *Lilac*—C. W. Brown & Son, 1st, with *Scarsdale*; Mills & Co., 2nd, with *Florence*.

5 spikes *Mauve*—E. M. Smith, 1st, with *Scarsdale*; C. W. Brown & Son, 2nd.

5 spikes *Blue*—N. Nelson, 1st, with *Baron Hulot*; E. M. Smith, 2nd, with *Baron Hulot*.

5 spikes *Dark Pink*—E. M. Smith, 1st, with *Panama*; H. Nelson, 2nd, with *Panama*.

5 spikes *Light Pink*—C. W. Brown & Son, 1st, with *America*; H. Nelson, 2nd, with *Rosy Spray*.

5 spikes *Striped*—Mills & Co., 1st, with *Niagara*; C. W. Brown & Son, 2nd, with *May*.

Save Your Stable Manure.

The experiment stations tell us that stable manure is worth somewhere around \$4.00 per ton now on a basis of present high cost of fertilizer. Of course this is an exact and arbitrary statement, but we may assume that it is approximately correct. Therefore, conserve your manure supply. Fork over the manure pile frequently to prevent burning and leave the pile with a flat top, and not a conical top, so that the rains may soak through and prevent burning and prevent fire-fanging. Frequent forking over will save a lot of the nitrogen content. Most directions for flower growing and gardening insist on using well rotted manure, but please note that there is most always a big loss in allowing manure to rot before it is applied to the ground. It is a pretty safe rule to apply fresh manure early in the fall to be plowed under in the spring, but it is a still better rule to plow in the fall, spread the manure on the newly plowed ground and thoroughly cultivate with a discharrow, then, if you want to plow again in the spring and have some well rotted manure to put on top of the spring plowing before harrowing you will have pretty nearly an ideal handling of the manure problem.

MADISON COOPER.

Long Keeping Qualities of Gladiolus Corms--Forcing Gladioli.

In the spring of 1916 I distributed some mixed corms to a Sunday school. Some half a dozen that were left over remained in the church for some weeks, when I took them home and put them on a pantry-shelf. There they stayed throughout the summer and following winter, and I planted them June 14. At that time not a sprout nor root had started on either of them, but two or three had grown fairly sized new corms on top of the old ones. They were badly dried up and some of them decayed, yet after a time one of them made its appearance above ground, and Sept. 18 opened out the first bloom of an exceptionally fine spike of *Kloniike*.

That shows the ability of a Gladiolus corm to stand grief. It was dug October, 1915, and planted June 14, 1917, thus having been out of the ground twenty months, most of that time enduring the heat and dryness of an atmosphere that Gladioli are not generally supposed to endure.

In this connection it may not be out of place to say that although it may be best to keep corms through the winter at a little above the freezing point, those who

cannot conveniently do so need not fear of entire failure. It so happens that it is convenient for me to keep my corms in a room in a cellar where bees are kept, and where the temperature is generally not far from 50°. Yet I could hardly ask that corms should winter in better condition. Perhaps one reason is that there is excellent ventilation, and the air is always about as pure as outdoors. A corm can hardly be blamed for going bad in a stuffy, moldy place such as some cellars are. Incidentally it may be said that a cellar of that kind is not the best place for a family to live over.

In that same cellar I succeed to a considerable extent in keeping corms over summer till the next fall for the purpose of having them bloom in the window the next winter. Some of them start sprouts, and if near the ground they start roots, but kept well up from the ground a fair proportion keep in apparently perfect condition.

As I said, I have kept them "for the purpose" of having them bloom, but I am obliged to confess myself a dismal failure at getting the bloom. They always come blind. I wish some one would tell me the secret of my failure. It seems that a thing so easily grown and bloomed as a Gladiolus should become a common thing in the window in winter, just as geraniums are.

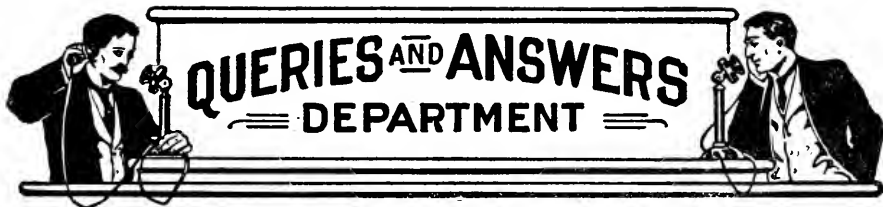
C. C. MILLER.

Note by the Editor—

Dr. Miller's experience in trying to force Gladioli for winter bloom is about the same as our own. We have tried it too and without success. Others seem to have tried the same thing, even trying to force for early spring when there is more sunshine, and without any important success. Surely florists who have had experience in forcing Gladioli could tell us more about this subject, and we hope that some of them will see fit to do so.

We took occasion to mention last month that with December, 1917, there were a large number of expiring subscriptions and to urge prompt renewal. Don't forget that the subscription rate advances January 1st, but that you can renew until that time at the present rate, \$1.50 for three years.

Subscribers need not be surprised when they see the 9" x 12" page next month and they will also see some change in the name of the magazine. The new name will be THE FLOWER GROWER, formerly THE MODERN GLADIOLUS GROWER, but the Gladiolus will not be neglected



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Deep Planting of Gladiolus Corms.

TO THE EDITOR:—

One of the professional florists here told me that he planted his Gladioli in trenches this spring, filling in the trenches as they grew. After the trench was filled in the corms were 11 inches deep, and he said they produced the finest flowers he ever grew, retailing at \$3.00 per dozen. Have you ever tried this plan? He thinks it helps to resist the drought. It would, of course, guarantee strong stems. I wonder if it would not also help to mature the bulb as when cutting flowers with rather long stems, this would leave more stalk on the corm. Some suggestions of experience in THE MODERN GLADIOLUS GROWER might prove helpful.

L. S. C.

Answer:—There is certainly no objection to planting as deep as 11 inches in the right kind of soil, but one must remember that when planting as deeply as this, it is necessary to work the soil somewhat deeper so as to get the humus of the top soil mixed thoroughly through to below the depth planted. The ground must be very deeply plowed or trenched, or planting as deeply as 11 inches is likely to get down into a lean sub-soil.

We do not regard such deep planting as practicable nor necessary under average conditions, but it might be advisable in a small way and for special purposes, but even then it is doubtful if results would justify the additional expense.

We make a practice of planting about six inches deep for first size corms and when planted in a double row and rather close together, say about two inches to three inches apart, they need no staking. Your suggestion that more stalk would be left in the ground, would, as we see it, be of no advantage as it is the foliage above ground that matures the corm and not length of foliage below the surface of the ground. In other words, it is the direct sun-light on the foliage that gives the result desired and any stalk below ground is of no advantage in strengthening the corm.

Deep planting naturally reaches to a depth where there will be more moisture in the ground, but in an open sandy soil even this is of little or no advantage during a long dry time. In our own garden, for instance, where we have a very lean

sand when we dig down a foot or more during a dry time it is just as dry, in fact, dryer than near the surface where the sand is mixed with humus.

It is our impression that your professional florist friend is suggesting a scheme which is not worthy of general adoption nor recommendation and we would need to see it demonstrated that it would produce much finer bloom than standard planting at a depth of about six inches for first size corms. It would be necessary to dig a deep trench and fill it with top soil to make the plan operative, as it is hardly practicable to plow to a depth sufficient to allow for planting as deep as 11 inches. In our garden we plow 10 inches deep, and as before stated, plant the corms about six inches deep and we believe this is about right in a sandy soil. In a more compact or harder soil a depth of five inches would be sufficient.

Rust on Gladiolus Foliage.

TO THE EDITOR:—

Can you tell me the name of the disease, if it is a disease that affects the foliage of Gladioli as shown by the sample enclosed? Is it rust? It does not seem to affect the bulb to any appreciable extent. What causes the condition?

N. L. W.

Answer:—The samples submitted show a defect which is commonly known as "rust" but which we believe is caused more because the corm is affected than because it is a disease of the foliage. You will probably find that foliage showing this symptom will have corms which are much more likely to be affected with rot during the winter than those with clean foliage.

The cause of this condition may be a long continued spell of rainfall, or it may be excessive use of stable manure, or it may be inherent in the corms themselves when planted.

Renewal subscriptions during December only will be at the present rate, \$1.50 for three years. After January 1st, 1918, it will be \$1.00 per year.

W. W. Wilmore, Jr., of Denver, Colo., well known to our readers through his series of articles entitled, "The Gladiolus Manual," is at present in the U. S. Army and necessarily his literary work must be dropped temporarily. Mr. Wilmore had established a growing business, giving especial attention to the Gladiolus and it is hoped that he will return safely and be able to continue the work in his chosen line.

We would call attention to the combination subscription offer of *The Garden Magazine* (regular subscription price \$2 per year) and THE MODERN GLADIOLUS GROWER, (beginning with January regular subscription price \$1.00.) The two can be had for \$2.00. They can be sent to separate addresses if desired. See full page advertisement in this issue. It is not often that a money saving combination of this kind is offered. A saving of \$1.00 or one-third, in these times of the high cost of magazines is worth considering seriously.— (Adv.)

A subscriber reports that he tried the experiment of cutting Gladiolus corms flatwise or horizontally and planting the bottom half upside down. He wanted to test the claim that the bottom half would throw sprouts and form new roots. He reports that while the top half planted in the regular way gave good plump new corms from each piece and good flowers, and that the bulblets averaged about as many as the bulbs planted whole, that the bottom half only grew where there was an eye. There are various schemes extant for promoting increase of growth and multiplication, but they all involve considerable labor and it is doubtful if they are practicable on a commercial scale except with new and extremely valuable varieties.

CLASSIFIED ADVERTISING.

Growers having surplus stock for sale will find this department effective in disposing of it. Five lines (about forty words) \$1.00 per insertion. Additional lines 15c. each.

W. E. KIRCHHOFF CO., Pembroke, N. Y., growers of the finest Gladioli, such as Pendleton, Panama, Niagara, Pink Perfection, Europa, Mrs. Fryer, War, Peace, etc. Correspondence solicited.

GLADIOLUS bulbs at reduced prices, 35 of the choicest varieties for decorative and florists' use. Large, healthy, plump bulbs, also planting sizes and bulblets. Booking orders now. Write for price list, wholesale or retail. T. H. FULLER, Gladiolus Specialist, Battle Creek, Mich.

TO any address, 100 blooming size of my giant flowering mixed Gladiolus bulbs, for \$2.00 prepaid. This mixture has pleased every customer for years. Make your friend a present and I will see that they arrive on Christmas morning.

P. L. WARD, Hillsdale, Michigan.

JUMBO The new, large deep pink Gladiolus. Fine commercial variety. Wholesale price on bulbs of all sizes, especially planting stock. Also bulblets, quoted on application. The Decorah Gladiolus Gardens, Decorah, Iowa.

A-1 GLADIOLUS BULBS—America, Brechnleyensis, Halley, Mrs. F. King, \$1.25 per 100; a very fine mixture of all kinds grown, \$1.00 per 100, f o b. Worcester. Crackerjack, Empress of India, Princeps, 20c. per doz. Glory of Holland, Kunderd Glory, Lily Lehmann, Scarsdale, 25c. per doz. Europa, Niagara, Peace, Golden King, 50c. per doz. Panama 35c. Rosella, War, Shawnee, Gov. Hanly, 75c. Evelyn Kirtland, \$2.00 per doz. Gretchen Zang, Herada, Wamba, \$1.50 per doz. Prices per dozen are prepaid. F. A. CARR, 1353 Main St., Worcester, Mass.

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Catalogues and Price Lists.

V. Lemoine & Son, Nancy, France, sent us their autumn, 1917, and spring, 1918, catalogue and price list. As usual this is a very complete list of greenhouse and outdoor flowering plants including many very uncommon ones, and including such well known flowers as the Iris, Gladiolus and Aster. Lemoines' Gladioli are already well known but not as thoroughly introduced to American growers as they should be.

John Lewis Childs, Inc., Flowerfield, Long Island. New trade catalogue for the season of 1917-1918, sixteen pages and cover. This is the standard Childs catalogue specializing in Gladioli with some very beautiful illustrations. In addition to a complete list of the Childs and other standard varieties, miscellaneous bulbs, Cannas, Dahlias, Irises and Peonies are listed.

J. J. Grullemans & Sons are mailing a special list of Gladioli for 1917. This list is very complete especially of varieties of European origin and particular attention is given to the Primulinus species.

W. E. Woodward & Son

— GROWERS OF —

Choice Gladioli

Saxonville, Mass.

Derby Gardens Gladioli

LIST ON APPLICATION.
WHOLESALE. RETAIL.

John H. Umpleby, Lake View, N.Y.

U. Lemoine & Son

Nurserymen, Nancy, France

GLADIOLI
Lemoinei and Nanceianus

Catalogue, printed in English, on application.

GLADIOLI

WHICH CATALOGUE WOULD YOU LIKE,
WHOLESALE OR RETAIL ?

John Lewis Childs, Inc.
Flowerfield L. I.

GLADIOLUS Niagara 60c., Panama 50c., Prince of Wales \$1.50, Golden West 50c., Parham \$1.00, Loveliness \$1.00, Pink Perfection \$1.00, Halley 35c., America 35c., Hulot 35c., Empress of India 35c., Glory of Holland 50c. Prices are per dozen for first size and prepaid.

JOHN ZEESTRATEN,

Mansfield - - - - Mass.

America, Princeps. Mrs. Francis King and Baron Hulot, 35c. per dozen.

Kunderd Glory, Halley, 50c. per dozen. Peace, \$1.00 per dozen.

Mrs. Frank Pendleton, Europa, Schwaben, \$1.50 per dozen.

All prepaid at these prices. These are all first size bulbs and in fine shape.

F. M. PALMITER, Janesville, Wis.

deGroat & Stewart

Growers of Choice Gladioli

We specialize in the choice American and French varieties. *Catalogue on request.*

Bath, N.Y.

Black Beauty

Awarded First Prize in Crimson Section by the Massachusetts Horticultural Society at their Gladiolus Exhibition last Aug.

This is the earliest of the dark reds, a rich, deep blood-red flower, flaked with black and of good size.

Straight spikes and round blossoms of great substance.

Order early---Stock limited.

\$1.00 per doz. Six for 50c.

H. E. MEADER

Gladiolus Specialist

Dover - - - N. H.

Trade list now ready

TWO MAGAZINES AT THE PRICE OF ONE

HERE is a most extraordinary opportunity to save money. In spite of the fact that prices of paper, ink, labor, etc., are rising steadily, the publishers of *The Garden Magazine* and *The Modern Gladiolus Grower* have combined to give American garden makers the best the country affords on the subject of gardening at a price within reach of the majority of garden owners. Whether you grow food crops (to reduce living costs) or flowers (to make life brighter) you need these magazines to score best results in every gardening endeavor.

Here's what Two Dollars will buy

The Garden Magazine The Modern Gladiolus Grower

A monthly of Practical Gardening

wants to help you make the garden a source of greater pleasure and profit. To those just starting, it will teach all the simple little things, from digging to hoeing. The initiated will find *The Garden Magazine* to answer most any question on the subject of gardening correctly and in detail.

Helps Make Gardens Greater National Assets

It will help you raise banner crops of prize vegetables, fruits and flowers. It shows the way to convert spare moments into dollars and cents in the form of good things to eat. With *The Garden Magazine* as your guide, you can take an active part in the national program of food production, even in the smallest garden. Hundreds of your garden neighbors throughout the country relate their experiences through *The Garden Magazine*, thus enabling you to profit by their methods or mistakes.

The Garden Magazine is one of the highest class periodicals in this country. Its regular subscription price is \$2 per year.

champions the cause of one of the loveliest flowers ever created. It is published monthly and each issue abounds with helpful information how to have the best of success with the increasingly popular *Gladiolus*. *The Gladiolus* is distinctly the flower for the millions. It thrives anywhere in this country, in any soil. What sorts to grow and how, when to plant, when to cut for the home, how to save and store the bulbs— in short, every phase of *Gladiolus* culture is taken care of in this distinctly practical publication which is of immense educational value to both amateur and professional alike. The magazine, at its regular subscription price of \$1 per year, is the greatest single contribution to *Gladiolus* literature in the world.

Send us your subscription, NOW, at this special rate

The publishers of both *The Garden Magazine* and *The Modern Gladiolus Grower* will mail 12 issues of each magazine for Two Dollars, beginning with the January, 1918, issue, *if you act promptly!* If desired, the combination can be made two Christmas presents, by having the two magazines sent to two different addresses. Don't pass up this exceptional money-saving opportunity!

The Combination Makes an Ideal Christmas Gift!

Send your subscription to either

The Garden Magazine
Garden City, L. I., N.Y.

The Modern Gladiolus Grower
Madison Cooper, Publ., Calcium, N.Y.

Kunderd's Gladiolus Catalogue for 1918 will be out early.

IT WILL CONTAIN the best cultural notes and other valuable information for all. We will offer a long list of magnificent new varieties (both ruffled and plain petaled), in **Kunderdi Primulinus** and large flowered kinds,—altogether the largest collection of high class varieties in the world.

Our 1918 catalog, with many new illustrations and containing 52 pages with cover is now in the printer's hands. It will be sent free for a postal request. Special offer for early orders.

(Address the Originator of the Ruffled Gladiolus)

A. E. Kunderd, Goshen, Ind., U.S.A.

Make Christmas last all summer long--

THIS CHRISTMAS remember your friends with a box of choice Gladiolus Bulbs. Think of the pleasure they will get from the beautiful flowers, opening in profusion all summer long, each bloom adding a link to the chain of friendship.

The "**Christmas Collection**" contains twenty-five choice bulbs—enough for a small garden. They will be packed in an attractive box, a card bearing your name will be enclosed, full growing instructions will be included, and the whole sent *postpaid*, to reach the recipient just before Christmas.

5 America, large flowers of lavender pink; **4 Baron Joseph Hulot**, rich violet; **4 Mrs. Frank Pendleton**, flushed salmon pink; **4 Mrs. Francis King**, deep salmon pink; **4 Peace**, giant white with lilac feathering; **4 Halley**, delicate salmon pink; creamy blotch.

25 BULBS, POSTPAID FOR \$1.

My new Gladiolus catalogue tells about many other choice sorts and several varieties in natural colors. Send for a copy, it is free.

JELLE ROOS

Department D

Milton, Mass.

10,000 Top Size AMERICA

PLANTING SIZE OF THE BEST
VARIETIES

Chautauqua Flowerfields,

R. R. 69

Bemus Point, N.Y.

M. F. WRIGHT Gladiolus Grower



1332 ECKART ST.
FORT WAYNE, IND.

THE BEST ALL AROUND
MODERATE PRICED
RED GLADIOLUS

INDEPENDENCE

A strong grower, sure
bloomer and stands up
in storm—

Ships well, holds its
color and blossoms
out to the tip.

Florists like it.

*Wholesale list of all varieties
to the trade.*

Wayside Gardens

Mentor

Box G

Ohio

Grow Your Own Stock--

Bulbets per 1000 post free:

America	\$.50	Mrs. O.W. Haldy	\$10.00
A. W. Clifford	5.00	Niagara	3.50
Baron Hulot	2.00	Panama	2.50
Brenchleyensis .....	.75	Peace	2.50
Blue Jay	4.00	Pink Beauty .....	.50
Chicago White	1.50	Pres. Taft .....	.75
Empress of India	2.00	Primulinus Hyb.	1.00
Geo. Paul	1.00	Princepine .....	.70
Glory of Holland	1.00	Rochester White	5.00
Halley .....	.75	Scarsdale	1.50
Mrs. F. King .....	.50	Schwaben	5.00
Mrs. Pendleton	3.00	The King	2.00

Rochester White

This variety is unsurpassed for an absolutely white gladiolus. It is "fussy" as to its environment but it grows to perfection on our soil. Another grower five miles away cannot grow it at all. We advise everyone to try a few bulbets and if it succeeds under your conditions you certainly have a winner.

Price 25c. each, \$2.00 per dozen.

Try these—Adeline Patti, violet, \$2.50 doz.; Alice Carey, white, 75c. doz.; Baron Hulot, blue, 75c. doz.; Cracker Jack, dark red, 50c. doz.; Hohensaufen, white, \$1.00 doz.

C. W. Brown & Son
Ashland, Mass.

Look for color
plate of

Gladiolus "MRS. WATT"

In January issue of The
Modern Gladiolus Grower

That many who are not yet familiar with the beautiful shade of "Mrs. Watt," may know of its distinctive color, I have made arrangements to reproduce this variety in its natural color in a full page display of next month's issue of this periodical.

Write for prices of blooming and
planting stock.

Wholesale and Retail.

HOMER F. CHASE
GROWER OF GLADIOLI
WILTON - NEW HAMPSHIRE

19 Awards and Certificates

Silver GUILT Medal, Haarlem, 1917; Silver GUILT Medal, Amsterdam, 1917, were given to

J. J. Grullemans' Sons, Gladioli Specialists

ESTABLISHED 1854

Royal West End Nurseries, Lisse, Holland

For their

NEW GLADIOLI

Our NEW PRIMULINUS varieties were awarded nineteen awards (*Awards of Merit and First Class Certificates*) in two seasons.

We are the only stockholders of the self-colored Primulinus, including over *twenty-five* distinct varieties of GOLDEN YELLOW, some growing tall, others medium in size.

Then we are the only stockholders of the beautiful *pink colored* Primulinus MAIDEN'S BLUSH. At the Amsterdam meeting it was unanimously admitted that this was *the finest and most attractive* Gladiolus ever shown. (For description see our Wholesale price list.)

Then, too, we are the only stockholders of Primulinus ORANGE BRILLIANT, an unsurpassable variety in this color.

Still we are the only stockholders of the beautiful Golden Yellow variety, MRS. GRULLEMANS.

Our stock of Primulinus Hybrids, mixed, we can highly recommend, as this mixture consists of only the light-colored varieties, including plenty of pure yellow.

Ask for our new list for season 1917-1918, now ready, which is to be had postfree on application.

All correspondence

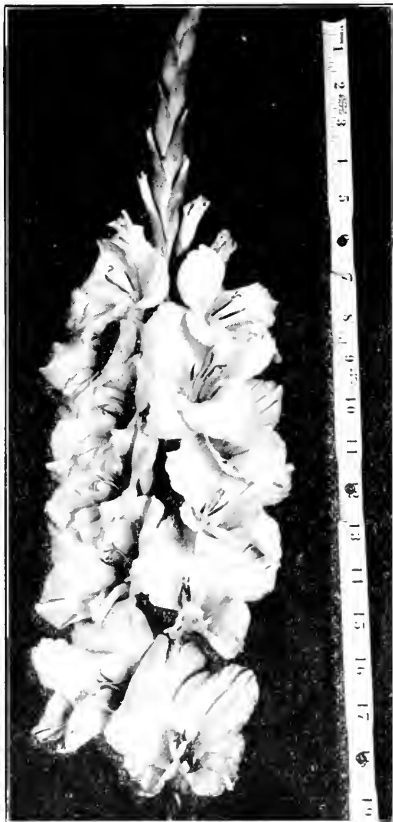
**Grullemans c/o Maltus & Ware,
14 Stone St., New York**

Until May the 15th, 1918

Richard Diener Co., Inc.

Originators and Growers of the Largest and Finest Gladioli in the World

We herewith offer the following varieties for immediate shipment, New Crop Bulbs—



WILLIAM KENT.

Reasonable discount on larger quantities. Now ready.

Kentfield, Marin County, Calif.

Dr. Frederick J. V. Skiff, flesh rose pink, 6 in. diam., Gold Medal P. P. I. E., Bulb 25c.; Dozen, \$2.50.

Diener's White, milk white, 6 in. diam., Gold Medal P. P. I. E., Bulb, \$1; Dozen \$10.

Captain Asher Carter Baker, bright scarlet, 5 in. diam., Silver Medal P. P. I. E., Bulb, 25c., Dozen, \$2.50.

Mrs. William Kent, fawn pink, exquisite, 6 in. diam., Bulb, 75c.; Dozen, \$7.50.

Anna Eberius, dark velvety Nellrose, 6 in. diam., Bulb, 25c.; Dozen, \$2.50.

Diener's American Beauty, brilliant American beauty color, 6 in. diam., Bulb, 75c.; Dozen, \$7.50.

Jack London, salmon, brilliant orange striped, 5 in. diam., Bulb, \$3; Dozen, \$30.

Richard Diener, pure rose salmon, 6 in. diam., Bulb, \$25.

Thomas T. Kent, rose pink, ruby center, 8 in. diam., Bulb 25c.; Dozen, \$2.50.

Adaline Kent, ruffled delicate rose pink, 5 in. diam., Bulb, \$1; Dozen, \$10.

Lilian Webb, strawberry pink, maroon center, 5 in. diam., Bulb, 25c.; Dozen, \$2.50.

Mrs. Mary Stearns Burke, apricot on yellow, 5 in. diam., Bulb, 50c.; Dozen, \$5.

Sir Roger Casement, ruffled dark maroon, 4 in. diam., Bulb, 75c.; Doz, \$7.50.

Mixed Seedlings, Grand Prize P. P. I. E., Largest bulbs, 50c. per doz., \$4 per 100; Medium size, \$3.50 per 100; Small size, \$3 per 100.

Mixed Seedlings, Grand Prize P. P. I. E., Cormels or Bulblets, \$1 per 1000.

The cormels (or bulblets) of all our varieties will flower five months after planting.

Selected delicate shades for Cut Flowers, Largest bulbs, \$1 per doz., \$7 per 100; Medium size, \$6 per 100; Small size, \$5 per 100.

Selected delicate shades for Cut Flowers, Cormels or Bulblets \$1.50 per 1000.

The cormels (or bulblets) of all our varieties will flower five months after planting.





Gladiolus Seed of all our varieties, mixed, which will flower 5 to 6 months after sowing, package of 1000 seeds—\$1.

Myrtle and Mrs. Frank Pendleton

Favorable growing weather not only produced good bulbs but fine harvesting season made a lot of good looking stock for retail trade.

We also have **Primulinus "Species," Princepine, Peace, Panama** and others in quantity.

**A. P. Bonvallet & Co.,
Wichert, Ill.**

 
P. Hopman & Sons
Gladiolus Specialists
Hillegom, Holland
 

Fred W. Baumgras
Gladiolus Grower

STANDARD and FANCY VARIETIES

20 fine named kinds, all different,
for \$1.00, post paid.

SEND FOR PRICE LIST.

423 Pearl St.

Lansing, Mich.

BOUND VOLUMES FOR

SALE Complete bound copies of THE MODERN GLADIOLUS GROWER of Vols. I, II and III, with indexes, are now available. They aggregate nearly 575 pages and contain much useful information. Mailed to any address postpaid \$1.25 per Vol. or \$3.75 for the three.

MADISON COOPER, Publisher,
Calcium, N.Y.

WE WISH
YOU ALL

A

MERRY XMAS

and

PROSPEROUS NEW YEAR



ORCHADOTTE FARMS

Box M

WEST POINT, PA.

GIANT NEW GLADIOLI

IT IS NEEDLESS to comment on the success of the Austin originations. These varieties have been developed with the firm belief that the tallest and most graceful Gladiolus in existence has been produced. You will not have the *best* in Gladioli until you grow them. This magnificent collection is now offered the public.



EVELYN KIRTLAND

Note illustration measuring length of spike with yardstick.

RETAIL PRICES

Evelyn Kirtland—Strong substance, beautiful shade of rosy pink, darker at the edges, fading to shell pink; brilliant scarlet blotches on lower petals. Entire flower showing glistening, sparkling luster. 25c. each, \$2.50 per dozen.

Gretchen Zang—Most beautiful soft, melting shade of pink blending into scarlet on lower petals. 20c. each, \$2.00 per dozen.

Herada—Immense size on tall spikes. A startling novelty of pure mauve, glistening and clear. 20c. each, \$2.00 per dozen.

Wamba—Enormous blooms of deep salmon. No collection complete without it. 20c. ea., \$2.00 per doz.

Cardisun—A large bloom, dark velvety red with nearly black throat. 20c. each, \$2.00 per doz.

Bertrex—A sterling white of great substance; winner silver cup for best seedling. 20c. each, \$2.00 per dozen.

Rose Wells—Large, wide open blooms; light rose, clear color, small attractive blotch of lilac rose and yellowish green. 15c. each, \$1.50 per dozen.

This collection has won 12 prizes including silver cups.

"America has recently added to our wealth in important Gladiolus two pink beauties that have been named Evelyn Kirtland and Gretchen Zang. * * * A new touch of color was added to our gardens last summer by the introduction of Herada, a brilliant mauve that is sure to become popular." *Montague Chamberlain, in August issue The Garden Magazine.*

"Evelyn Kirtland is the most magnificent Gladiolus I have ever seen and I have seen most all there are."— *Wilbur A. Christy, Secretary-Treasurer Gladiolus Society of Ohio.*

Send for **WHOLESALE** or **RETAIL** List of **Novelties** and **Standard Sorts.**

Austin-Coleman Co.
"Home of Elm Hill Gladioli"

Wayland - - - - Ohio

Gladiolus

20 Named Sorts - - \$1.00

List of named sorts on request.

Pansy Plants

40 Nice Plants - - \$1.00

POST PAID IN U. S.

Amaryllis

Nice Stock, Large Bulbs,
\$4.00, \$5.00 and \$6.00 a Doz.

F. O. B. HERE

The most Gorgeous Flowers
of all bulbous plants.

C. S. TAIT

Brunswick - - Ga.

Geo. S. Woodruff

Independence, Iowa

Fine Gladioli



See my advertisements in previous num-
bers. *Catalogue on application.*

Munsell & Harvey

Growers of Gladioli

Ashtabula - Ohio

E. E. STEWART

Wholesale Grower of
GLADIOLI

List of 85 varieties.

Brooklyn - - Mich.

Vaughan's Specials in GLADIOLI



Margaret

Beautiful Carmine with
white throat.

Per doz., \$1.30; per 100, \$9.

Prim. "Sunbeam"

The best and most distinct
of all the Prim-
ulinus Type.

Per doz., \$2; per 100, \$15.

Chicago White

The best early white.

Per doz., 35c; per 100, \$2.25

Write for our 1917 Cat-
alog—Grand Novelties
in GLADIOLI and CANNAS.

**Vaughan's
Seed Store**

CHICAGO, 31-33 W. Randolph St.
NEW YORK, 43 Barclay St.

MARGARET

WESTERBEEK & KLYN

BULB GROWERS

SASSENHEIM, HOLLAND

25 Beaver Street, New York City

QUALITY—ECONOMY—SERVICE

Sunnyside

Gladiolus Gardens

L. Merton Gage, Proprietor
Natick, Massachusetts

Gladioli Exclusively

GLADIOLUS BULBS

of our own growing—wholesale and retail
—best standard and new varieties.

Young, vigorous two year old bulbs.
The best crop we ever grew.

G. D. BLACK, - - - Albert Lea, Minn.

Surplus Stock---

WRITE NOW FOR SPECIAL
QUOTATIONS ON

Pendleton

Peace

Niagara

Pink Perfection

Halley

AND A DOZEN OTHER GOOD
ONES.

Brookland Gardens

Choice Gladioli

Woburn, - - - Mass.

Gladiolus

MRS. W. E. FRYER

	PER DOZ.	PER 100
No. 1 -	\$1.50	\$10.00
No. 2 -	1.25	8.00
No. 3 -	1.00	7.00

Every bulb of the No. 3 size
will bloom.

At the dozen rates they are sent pre-
paid. By the 100 by express collect.

If a dozen of the three different
sizes are taken I will give *The
Modern Gladiolus Grower* one year
as a premium.

WILLIS E. FRYER,

Mantorville - - - Minn.

