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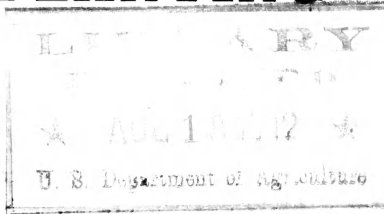
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# BULBS FOR FALL PLANTING

a catalog of



The Amaryllis, Iris, Lily, Arum, Orchid, Billbergias and Other Families.

Special Articles: United We Stand—a war message to flower lovers; How to Grow Amaryllis; General Culture Directions; Acid and Alkaline Soils; Bulbs for Window Gardens; Culture Directions for All Bulbs.

FALL 1942

CECIL HOUDYSHEL

1412 Third St.

La Verne, California



Division of Fruit and  
Vegetable Crops and  
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Bureau of Plant Industry  
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## UNITED WE STAND

Dear Floral Friends:

I like to assume that all flower lovers are friends and our customers have nearly all had this attitude. Your friendly letters are much appreciated even though I can only answer all in one letter in each catalog.

I write to you usually about human foibles, health, happiness, education, events, flowers, or cabbages and kings. I am interested in you, your happiness and welfare. The uppermost interest right now for all of us is Victory, and how we can do our part.

Every American must ask himself this question: "How can I best contribute to Victory?" I have asked it of myself. I tried to volunteer in 1917 and was told that I was too old. Probably 25 years has not changed their viewpoint, the Army would not want me. Nor would the Defense Industries. My former profession, Education, prefers youth. But I have a talent that America profoundly needs, the ability to grow bulbs and flowers, help others to grow them.

Thus I can contribute to morale. This effort offers great opportunity to many and varied enterprises, from Churches, Schools, Libraries to Beauty Parlors and Florists. The work they accomplish contributes to Victory because it strengthens our spiritual and mental nature and gives us self confidence.

America needs **you**. How can you best serve? Apparently not enough of us are doing our utmost. Many assume carelessly that America always has won, always will. Many are concerned with questions of personal interest. How can I earn more money? How can I get the most out of this situation?

Are America and her allies bound to win? To answer this, review the answers to the following. Are we winning now? Are our armies advancing or retreating? Do victorious armies constantly retreat?

We know that the armies of the United Nations lack nothing in courage and ability. We have vastly greater resources of man power, industrial capacity and materials. What we lack are ships, planes, bombers, tanks and the things required for mechanized warfare.

Our Allies are producing the limit of their capacity. The vital factor, the place where victory or defeat is to be decided is in American Industry.

When capital and labor make sacrifices, not equal to those of the soldier, but appropriate to them, Victory will be assured.

We all need to make the supreme effort of our lives, **now**, not next week. To do that we must also rest and relax. One cannot merely eat, sleep and work. One must also have mental and spiritual rejuvenation. One of the important sources for this is in your garden, with your flowers.

Your garden will satisfy your craving for beauty. It will replace many of the pleasures that are now somewhat restricted since we must travel less. I suggest you might use a little imagination as Mrs. Houdyshel does. When in need of a brief rest, she says, "I am going for a little trip to our canyon retreat." Her "retreat" is under a large avocado tree shut off from the house, the street and the rest of the ranch by tall gingers from India and by other large trees all around. There are lush Haemanthus from S. Africa, terrestrial orchids from China and Brazil, Billbergias from S. America and Hawaii and many others close by. It is not so much like a California Canyon retreat except for the cool deep shade. One could call it a trip around the world because few countries are not represented in our garden.

In order that you may have the best garden success, I have rewritten the culture advice in this catalog and made it much more explicit and complete. I have added several pages to the catalog and omitted all the cuts prepared for this issue.

This advice is based on a lifetime experience in growing bulbs, not on reading knowledge. No other catalog gives as much culture information.

I trust you will work hard, have a wonderful garden and buy all the bonds you can possibly buy.

Yours for Victory,

CECIL HOUDYSHEL

# TERMS AND INSTRUCTIONS FOR ORDERING

Read the following carefully. It will avoid delay or misunderstanding.

**Sales Tax.** California customers add 3% for state sales tax.

**Order Early.** Late planting results in less satisfaction with most bulbs.

**Remit with order,** by check or M.O. Currency or coins are acceptable but we are not responsible if lost. Stamps reluctantly accepted in small amounts but customer must add 6% to amount remitted.

**C.O.D. Orders** require more labor to fill. Cost you 25c up in P.O. fees. Avoid if possible. On the average we lose money on C.O.D. orders.

**Postage prepaid** on orders of \$1.00 or over. Under \$1.00, add 10c for postage and wrapping. Insurance 5c extra.

**Prices** given are for one bulb unless otherwise stated. A dozen costs ten times the price of one. Six bulbs are sold at the dozen rate. The 100 rate, if not given, is 70 times the cost of one, but no less than 100 will be sold at the 100 rate. For 50 bulbs apply the price of 4 dozen.

**Wholesale.** Dealers send for our Wholesale Bulletin. Use your business stationery or otherwise identify yourself as a bonafide dealer.

**Garden Clubs,** who pool their orders for collective buying in quantity, send for our Garden Club Bulletin. We give you wholesale prices and discounts on a "transportation prepaid" basis. This Garden Club Bulletin is available only to the official Purchasing Agent of actually organized Garden Clubs but not to individuals, even though Garden Club members.

**Foreign Orders.** Postage is prepaid if no greater than to our 8th zone. Best to remit a little extra. If too much, we send extra bulbs.

**Errors.** Our packers make a few, not many. We want to correct them. Notify us at **once**, in case of shortage or error. **Unpack** your order as soon as received. Don't wait two weeks, then tell us the bulbs were mouldy.

**Substitution.** If out of a variety, we usually substitute one as near like it as possible, as good or better and of equal or greater value. If you do not approve this, say, "no substitution."

**Guarantee.** Our bulbs are true to name, and healthy. We do not, however, accept any responsibility for their performance since we cannot control the conditions of their growth. If, in your opinion, our bulbs are not up to our specifications, please notify us at once when you receive them. But do not return them until we explain. One of our customers last year returned Dwarf Callas because they were small.

**Culture directions** are not sent with bulbs as all necessary information is given in this catalog.

**Catalogs.** **Spring Catalog** is mailed Jan. 15. **Fall Catalog** Aug. 15. **Iris Price List**, sent on request only, at any time. If no orders are received for two years, names are dropped from our mailing list.

Our catalogs are inexpensive. Naturally the customer pays for his own catalog and for those who do not buy. We make ours as inexpensive as possible, thus adding little to the cost of selling. What we save in space required for pictures, fancy type, order sheet, etc., can be used for more complete instructions in the growing of bulbs. Forty-four years of growing bulbs, over twenty-five as commercial growers (not merely selling them, but actually growing them), should make our culture advice valuable.

**Correspondence.** Your letters and reports on growing afford us much pleasure and profit. One person could not answer all. We ask you to understand that this is the reason we do not reply individually if it can be avoided. Many ask questions that the catalog answers. Read our Personal Letter.

**Identifying Bulbs.** We try to identify bulbs. We can often do this from the flowers and leaves, tho it is better to include a bulb. Sometimes a bulb must be grown on. If so, we label it and inform you when it flowers or is identified. The service is gratis. We cannot undertake, however, to identify horticultural varieties of Iris, Gladiolus, etc.

**Exchanges.** We will buy or exchange for your surplus bulbs that we can use. Inquire or make offer before sending bulbs.

## General Culture Directions

The best all around soil for bulbs is a rich sandy loam. Only a few, including Bearded Iris, prefer heavier soil. But bulbs will do well in heavy soil that has been made friable by the addition of much humus. Iris do well in sandy soils that have been improved by accumulations of humus.

Thus the most important factor of soils is the humus content. On our "Rancho de Las Flores" we compost all weeds, leaves and small branches.

Spade in deeply much compost and include if convenient, well-rotted manure. Do not use fresh manure except six months before planting bulbs. Soil and humus should be well-mixed and preparation of beds well in advance of planting is an advantage. This very thorough preparation of soil is advisable for garden soils of poor quality and an advantage on the best soils, but even without the additions suggested bulbs do well in most soils.

**Fertilizers.** Adding strong fertilizers just before planting bulbs or seeds is popular but dangerous. In the average case more harm than good results. One would not give a day-old infant a working man's meal of ham and eggs or a boiled dinner, a slice of pie and two cups of strong coffee. The strong fertilizer, either manure or chemical, burns off the new roots of sprouting seeds and bulbs and they die. Manure in small quantity can be applied as a mulch to growing plants.

**Commercial Fertilizers** must be used with care and only in the proper manner. Risk attends their use by the inexperienced. We do not attempt to tell you how except that we use a small handful of Superphosphate to about 10 ft. of row of Gladiolus. It is the proper fertilizer to use for acid loving plants. It is better to try out fertilizers on one or a few plants before apply them to all. Superphosphate is a very strong fertilizer and should be applied only in very small quantities until you learn how much to use.

We are frequently asked this question: Our Daffodils, Gladiolus, Ranunculus (etc.) are thru blooming. May we cut off the tops (or dig the bulbs), as we want to plant something else there? The answer is "No." Consider the annual life cycle of a bulb. After a dormant period it makes roots first when planted. Then a top growth of foliage and flowers. The growth is much more rapid than a plant grown from seed can make, because there is much stored up food in the bulb.

When thru blooming, this stored up food is completely used up. If dug at this time or tops are cut off the bulbs are almost worthless. A few may survive but two or more years are required to bring them back. The correct culture is to induce vigorous growth in order to store up a large amount of food for next season's growth. If given time, the bulb will become large and plump. At this time most bulbs also develop a bud for the next season. This bud may be found by cutting the bulb thru the middle.

During this period of growth, there are also enzymes or digestives manufactured and stored away in the bulbs. Glads should grow several weeks, at least, after flowering. Daffodils will grow at least three months. Keep bulbs growing with good cultivation and liberal irrigation until leaves begin to yellow then dry off.

During the succeeding dormant period, the enzymes reorganize or digest the stored up food. The insoluble starch is changed to soluble sugar. That is why potatoes become sweetish in taste in late season when they begin to sprout.

Thus the "dormant" bulb is very busy with this process which requires from a few weeks to 3 or 4 months. This dormant period in plants may be compared to the sleep required by man and other animals. Our bodies require sleep for the accomplishment of vital processes.

Amateur growers often expect a bulb to grow at once when planted. One should not attempt to start bulbs until all the processes of the "dormant" period are accomplished.

When you purchase Gladiolus bulbs for fall planting be sure they were dug early, about July or August. Ranunculus and Anemones dug in July will

start after two or three months "rest." But they will start a lot more quickly and will grow more rapidly when the rest period has been longer. Indeed, when possible to obtain them, it is an advantage to plant bulbs that were dug a full year or even two years before. But this applies only to Ranunculus and Anemones. Most bulbs dry up soon after their dormant season has passed if they are not planted.

The purpose of this discussion is to enable you to grow your bulbs successfully not only the first season, but thereafter. One cannot escape the deduction, however, that the bulbs should be purchased from growers who know how to produce good bulbs. Be sure to start right.

**Consult all References** available. We use Bailey's Cyclopedia of Horticulture. 3 Vol., over 3600 pages. It is in most city libraries. Send us your order. Price \$15.00, plus sales tax in Calif, postpaid.

## ACID AND ALKALINE SOILS

Most plants thrive in a wide variety of soils and are not too particular about the soil pH. Such plants are widely distributed and include our most common ornamental and economic plants and especially weeds. But some of our most important plants are very exacting in their requirements.

The pH of the soil (or any substance) is measured in units thus, pH 5.5. It refers to the relative acidity or alkalinity and this depends on the concentration of the hydrogen ions. The scale runs 1 to 14. pH 7 is neutral. Below that the acidity increases as the pH decreases. Above pH 7 the scale indicates increasing alkalinity.

Most semi-aquatic plants and shade loving plants do best in a mildly acid soil. This will include most plants that grow in woods or bogs.

Among bulbs the following do much better in mildly acid soils, around pH 6 and some possibly like more acidity. Gladiolus, Vallota, Callas, Caladiums, Arums, Lilies, Haemanthus, Nerines, etc. Those requiring neutral to mildly alkaline soils are Iris, Hippeastrums, Daffodils, etc.

The acidity of a soil may be increased by the incorporation of any form of vegetable matter. The most acid is imported peat, leaf mould and tan bark. In fertilizers Superphosphate, Aluminum sulphate and sulphur are acid.

Lime, gypsum, ground shell, manure with ammonia odor and most commercial nitrogenous fertilizers are alkaline.

It is often important to know the pH of your soil. Anyone can determine it and no knowledge of chemistry is necessary. For \$1.00 we will mail you a Soiltex outfit with materials needed and complete simple directions.

**Vitamin B<sub>1</sub>** is believed to be a useful stimulant for bulbs. In transplanting, soak the roots of bulbs or any plants in a solution and the plant does not even wilt. We have done this with Hippeastrums in bloom and the flower was uninjured, lasted for days and ripened seed. Use it on growing plants for better plants and bloom. Altho some experimenters claim that vit. B<sub>1</sub> has been overrated, our experience seems to show that it is useful in transplanting or in stimulating a more vigorous growth.

**Our new prices.** 200 Tablets for \$1.00. 100 for 60c. 50 for 35c. 25 for 20c.

**Directions** for use on plants in garden or in pots. For the first application dissolve one tablet in 2 gal. water. For succeeding waterings use one tablet in four gal. water, once a week. One can use these tablets as strong as one tablet to a gallon for infrequent applications. When transplanting shrubs, bulbs or any plants, dissolve 5 tablets or even more in 1 gal. water and soak roots 15 to 30 min. Pour solution around the plant when set.

**Warning:** Do not soak dormant bulbs with vit. B<sub>1</sub> solution. It rots them. It should not be applied to bulbs when planted until abundant roots are formed. These directions apply only to the tablets we sent out. They may be quite wrong for any other kind.

**Bulbs for Southern Gardens.** Our bulbs are all grown in the field or in lath houses in the semi-tropical climate of Southern California. Hence they are all ideal for outdoor planting in the south where temperatures are equally mild. Very many are hardy in the north. In our culture directions we state

how far north a variety may be expected to be hardy. They are equally adapted to growing in pots.

## Bulbs for Winter Window Gardens

The Bulbs and Plants listed in the catalog were selected by us to grow and sell because of their desirable qualities in the outside garden or as pot plants for winter or early spring blooming indoors.

For pot growing we especially recommend the following. The approximate time of flowering is mentioned in parenthesis. **Amaryllis Family.** **Agapanthus**, (Early spring). **Amarcrinum**, (All seasons). Requires very large pot. **Clivia**, (Mar.) **Cyrtanthus**, (Winter.) **Haemanthus puniceus**, **H. multiflorus** and **H. Katherinae**. (Late spring to June.) **Hippeastrum** or **Amaryllis** species and hybrids. (Usually Feb. to Apr. but sometimes Dec. or Jan.) **Hymenocallis**, Species No. 1 and No. 2, are Spider Lilies of delicate beauty that force easily in not too large pots. **Nerine filifolia** and **N. rosea crispa**, (Oct. to Dec.) **N. fothergilli**, (Oct. Nov.) **N. Bowdenii**, (early winter.) **Sprekelia formosissima**. Our evergreen type is one of the most satisfactory pot plants which blooms now and then thru the year. We always have winter flowers. **Tulbaghia violacea**. I believe I have never seen them when not showing flowers. All **Daffodils** and **Narcissus** but we especially recommend **Paper White**, (Nov.-Dec.) **Chinese Lily**, (Dec.-Jan.) **Soliel d'Or**, (Dec.-Jan.) and **Poetaz Hybrids**. **Allium neapolitanum**. **Iris Family**. **Freesias**, (Feb.) **Sparaxis**, **Ixia**, **Tritonia**, **Babiana**, **Baby Glads** (all Feb. or later.) **Marica**, (late winter.) **Moraea**, all species, (late winter to spring.) **Lily Family**. **Colchicum**, (Aug. Sept.) **Roman** and **Grape Hyacinths**. (late winter.) All **Scillas** will flower in pots but the tender **S. peruviana** is especially recommended. (Late winter.) All **Ornithogalums**. The **O. arabicum** will flower about Easter and is taking the place of Easter Lilies that are hard to get at present. **Lilium Harrisii**, (about Easter) **Lachenalias**, (Dec. 15 to late Feb.) all varieties. **Veltheimia**. An exceptional pot plant and flower. (Dec. 15 to Mar.) **Oxalis**, all winter growing sorts. Very bright and cheerful. Begin to flower early and continue long. **Arum Family**. **Callas**. White and Colored flower well in pots. Do not pot colored Callas before Dec. 15. White Callas may be started much earlier, as they have been dormant all summer.

**Miscellaneous.** **Anemones** and **Ranunculus** bloom well in pots. The large sizes are best though some claim that #3 size will force. **Billbergias** are fine pot plants. Do not over water in winter until they start but do not allow to dry out either. **B. nutans** blooms first, about Feb. It is a gorgeous flower. Other varieties later. Many have rich mottled foliage. **Violets**. The new violet **Royal Robe** flowers well in winter in pots in a cool room. Many other bulbs can be flowered in pots. We have mentioned only those we could recommend most highly.

**Potting Directions.** Be sure drainage is perfect, by placing broken crock over hole and over that fine gravel or coarse sand. Soil should be loose and rich and so pervious that water passes thru easily and does not become sodden. Combine sand, garden loam and humus to get a right soil texture. A little well-decayed manure may be added. For acid loving plants, peat may be used for humus. Most bulbs like a little bone-meal.

When potted the bulb may be well watered to settle earth around and start the roots. But for most bulbs, much water before roots form is a disadvantage and many will rot. Best to keep only slightly moist until growth starts then gradually increase. Pot bulbs early to give time for full root development before they flower. Too much heat and moisture may rot dormant bulbs before they form roots.

This seems to be the most common cause of failure with potted bulbs. They are given much moisture and a warm room. Most of them should have a cool room at least until they start. For most of them the soil should be watered only once to settle soil. It is best to press the soil down and water only slightly, adding thereafter only enough to prevent complete dryness. Bulbs should be allowed to take their time about starting. Sometimes we get an indignant letter because a bulb rotted. The bulb was perfectly good



but the grower was not. Amaryllis start satisfactorily at the right time but even though it is a tropical bulb it should be started in a cool room in half light. Later they can be brought to a warm room.

**Size of pot.** Many advise not to use too large a pot. But no pot is as large as all outdoors and most bulbs bloom satisfactorily in an over sized pot. Usually the pot should be at least 2 and we prefer 3 times the diameter of the bulb for large bulbs. Small bulbs like Ranunculus, Freesias etc. can be planted 3 to a 4" pot or 5 in a 5" or 6" pot.

**Temperature.** Nearly every bulb recommended requires a cool room temperature. Very few succeed in the hot dry air of many living rooms. The maximum temperature for best results with most is seldom much above 70°. Most of them like cool nights but not below about 35°. Amaryllis like a little more heat when growing vigorously, as they are summer growers. Violets, Anemones and Ranunculus like cool temperatures. The night temperature can go down to 30° or 35°. Day temperatures are better around 60°, tho 70° may not hurt them.

**Watering** should be sufficient after they are well started but allow soil surface to become slightly dry between waterings. If soil is well drained then it will not become soggy which would result in failure. Vigorously growing plants that are good feeders like Amaryllis, Colored Callas etc. can use very weak liquid manure, color of weak tea, every two or three weeks. Between times B<sub>1</sub> solution may be used. But neither must be used on a weak plant.

Other hints will be given with the listing of bulbs.

## Arrangement of This Catalog

Please note that we group our bulbs into the Families to which they belong rather than arranging them alphabetically. Knowing the relationship of a bulb is an advantage that all will approve, but it adds a little difficulty in finding a bulb if you do not know its plant family. This catalog is worth study for the information it contains. Study and experience are the only means of gaining knowledge.

## THE AMARYLLIS FAMILY—Amaryllidaceae

This family includes the bulbs from Agapanthus and includes The Alliae.

**The American Amaryllis Society** is an association of those thruout the world who grow Amaryllids as an interesting and intellectual hobby. An annual book "Herbertia" of about 250 pages is sent to each member. Therein is discussed the best culture methods; descriptions of new species; notes on Amaryllids in their habitat; reports on experiments in crossing, in culture, propagation, etc. Herbertia is the essential book of reference on Amaryllids. Beautifully illustrated. I invite you to send me \$2.00 for membership. You will receive volume 9 of Herbertia for 1942 as soon as published, probably by December.

Bulb lovers who specialize in the Amaryllis Family would enjoy having the complete set of 8 vols. of Herbertia 1934 to 1941 inclusive. Price \$23.50, postpaid. Several issues will soon be out of print and never again available.

**How to Grow Amaryllis.** This discussion includes not only the genus Hippeastrum, which recently botanists have changed to the old popular name of Amaryllis, but will also include the entire family of Amaryllids. The name, "Amaryllis" has been bandied around by botanists from Linnaeus to Herbert and later. At times the name has been applied to species of Crinum, Lycoris, Nerines, Zephyranthes and many others.

Changes made by recent writers evidently are scientifically correct but inconvenient to amateurs. We must gradually accustom ourselves to the name *Callicore rosea* in place of *Amaryllis belladonna*. We must learn also that the bulb known in America as *Nerine sarniensis*, or Guernsey Lily, always was an error. The correct name is *Lycoris radiata*, or Red Spider Lily. *N. sarniensis* is quite a different bulb, tho the flowers have a casual resemblance. We must likewise learn to call the common type of Blue Lily of the Nile *Agapanthus orientalis*, instead of *A. umbellatus* if we wish to be botanically up-to-date.

Such winter growing Amaryllids as *Callicore rosea*, *Haemanthus coccineus*,

Hippeastrum advenum, Lycoris, all species, Nerines and Sternbergia should be ordered at once after this catalog is issued. If planted by Sept. 1 they will usually flower. If two weeks later, they often do not. We do not guarantee these bulbs to flower when planted in the fall. The perfect time is July to Aug.

**Hardiness.** All Amaryllids listed are hardy outdoors in the far south. Amaryllis, Amarcrinum, Agapanthus, Callicore, Crinums, Hippeastrums, Habranthus, Hymenocallis, Lycoris, Sprekella, Sternbergia and Zephyranthes are hardy along Atlantic coast to No. Carolina. Inland most of them are grown successfully with protection at Washington and Philadelphia Arkansas and even in southern Missouri and southern Kansas. There are, no doubt, other milder locations where they could be grown. Where the location is on the borderline, they should be planted more deep and in a protected location like the south side of a house, a wall or evergreen tree. They may be protected in winter by a mulch or leaves or by a mound of tree branches. Hippeastrums can scarcely be wintered in the garden where temperatures go much below 20°, unless planted deeper than the frost penetrates.

The following are quite winter hardy in the north. Crinum longifolia, Lycoris squamigera, L. incarnata and Leucojum aestivum. Only a little less hardy are Crinums moorei, Cecil Houdyshel and Powellii as well as Amarcrinum. In milder sections, with deep planting and protections they should succeed.

**Sun exposure and water.** Most Amaryllids like plenty of water when growing. When dormant they should receive little. When starting recently potted bulbs, water little until growth appears. The following do well in full sun or a little shade. Lycoris, most Crinums, Callicore rosea, Nerine, Hymenocallis, Leucojum, Elisena, Pancratium, Zephyranthus, and Sprekella.

Give 25% to 40% shade to Hippeastrums, more than that to Agapanthus and Vallota. Full shade or almost but with plenty of light to Haemanthus (except coccineus which should have full sun) and Clivia. Polianthes, (tuberose), most Alliums, Milla and Bessera should have full sun. If Crinum foliage burns, give it more shade. C. Moorei, Virginia Lee and Gordon Wayne require almost full shade.

Most Amaryllids prefer rich sandy loam soil and are gross feeders. Slight but frequent additions of manure should be added as a top mulch, when in full growth. Most of them may use even fresh manure if growing vigorously but use caution. On poor or worn out soil few do well except Hippeastrum equestre which grows vigorously but fails to flower except in thin sandy soil.

So many customers request special information about Hippeastrum (Amaryllis) hybrids that we give special instructions. Pot the bulb at once when received in rich sandy loam soil to which has been added about 25% or more of well rotted manure. Pot may be 2 or 3 times diameter of bulb. If you order in the fall living roots will be attached to bulb. This is an advantage. Set bulb half above surface in pots (or just covered in garden). Spread out the roots. Firm the soil. Water once. It should drain well. Temperature of room should be cool. Pot should not be in much light at first but when flower bud is up above the bulb give it gradually more light, until finally it is placed in full sun in window, as winter sun is not too strong. The bulb should not be watered a second time until the bud is well developed. Then increase gradually. Too much is bad. When pot is well filled with roots, and it should be when they are in flower, they need plenty of water. Liquid manure is very good, but if roots have developed very slowly, recently potted bulbs may receive much injury. For best growth of bulb remove faded flowers and prevent seed production. Keep the bulbs growing until late fall. Remember, luxuriant growth after flowering and until late fall is necessary to form the flower buds. Then about Nov., or earlier if leaves become yellowish, gradually reduce water. The pots should be nearly dry until a new bud appears. If dormant early the bud sometimes appears in Dec. But it is usually from Jan. to March. The bulbs need about 10 weeks rest.

**Clivias** are usually grown in pots even in south tho we grow in the garden under shade of trees (evergreen) where only a few spots of sun can touch them and in a lath house with laths spaced about  $\frac{1}{2}$ " apart.

The pot should be 8" to 12" for large plants. Use good rich friable soil with leaf mould and well rotted manure added. Drainage **must** be perfect. Water well when potted but do not over-water later. They use plenty when well-established. They do not like hot rooms, and must not be in the sun, nor in a dark poorly-ventilated corner. They are heavy feeders and respond to liquid manure.

The following may be grown by the "Gladiolus method," that is in the garden, then dug and stored dry over winter. Ismene and other Hymenocallis, Crinum, Cooperia, Elisena, Zephyranthes, Bessera and Milla.

Agapanthus, Crinum and Amarcrinum, may be grown in a very large pot, bucket or tub outside and wintered in a frost-free, light basement or cellar. The Agapanthus should not dry off enough to cause loss of leaves. The others may be quite dry. Growing large clumps of Agapanthus in tubs is a favorite method in cold climates. Additional culture information is given if necessary in the listing of species.

## List of Amaryllids

**Agapanthus.** Blue Lily of the Nile. The name means Love Flower. They are universal favorites in the south for the gardens and many grow them in tubs or buckets in the north.

**Agapanthus longispatus.** A new species whose flowers resemble Orientalis, but has more graceful foliage and flower stem, and is more profuse in flowers. 85c ea.

**A. orientalis.** (umbellatus) Many deep blue flowers in a large umbel, on 24" stem, blooming in spring and thru the summer. The large plants form very attractive clumps with a strap-like foliage. Our variety is an especially fine one, with deep blue flowers. 50c.

**A. orientalis,** sky blue variety. 60c ea.

**A. mooreanus minor.** A deciduous dwarf variety particularly adapted to pot culture. Dark blue flowers on a 2' slender scape. Store pots nearly dry over winter. 35c. Three plants, for a 6" pot, \$1.00.

**Alstromeria.** Alstromerias are very showy plants with long slender stems. As a cut flower they last a long time, are very beautiful and are distinctly different from the more common flowers. The individual flowers much resemble a highly colored small orchid. The flowers are in a large umbel on a long stem.

**Culture.** They should have about 50% shade. The soil should be a rich sandy loam with good drainage and a great deal of humus. They do not do well in a heavy soil. This may be had from old rotted screened manure or leaf mould. Plant the cluster of tubers in the south from Sept. to Nov. with the crown 2" under the soil surface. When tops die after flowering withhold water or dig and keep dry. It is better not to disturb them. In the south they start to grow in the fall and will require irrigation before rains come.

They must have an abundance of water at all times when growing and good drainage. They are hardy as far north as Washington, D. C., and we have them reported hardy in a well protected situation, with winter mulch, in New Jersey and Ohio. In the north they can be planted in the spring. Carefully lift in the fall and store in dry peat or sand, and keep very cool. They also may be grown in large pots. Please order early in full, as it is hard to hold them back in this warm climate.

**Alstromeria aurantiaca lutea.** Bright yellow flowers. A strong grower and blooms a long time. Flowers fine for cutting. 20c. Per doz. \$1.75. Per 100 \$12.00.

**A. chilensis.** Extremely attractive flowers in a wide range of color from nearly white to various pink, red, yellow and orange tones. One of the best and easiest to grow. Assorted colors only. 15c Per doz., \$1.25. Per 100, \$10.00.

**A. pelegrina.** Lily of the Incas. Dark rose, with petals spotted reddish purple. Vigorous and showy. 25c. Per doz., \$2.25.

**A. pelegrina alba.** A lovely white unspotted form. 25c. Per doz., \$2.50.

**A. pulchella.** Large clusters of dark red flowers tipped green and brown spots inside. Tall long stems. Early flowering. 15c. Per doz., \$1.25.

**A. Assorted Varieties.** These are all of bloomign size and some are large. We include in this mixture those that have lost the label, surplus sorts, etc. 15c. \$1.00 doz.

**Amarcrinum Howardii.** A cross between Crinum moorei and Amaryllis belladonna. A delicate pure sweet pink color. Increases wonderfully fast and blooms in all seasons even midwinter here. \$1.00 ea. Extra large, \$1.50 and \$2.00.

**Amaryllis belladonna.** Botanists have recently changed its name to **Calli-core rosea**. We must get accustomed to this new name. It has many common names—Surprise Lily, Naked Lady Lily, or better Lady Godiva Lily are descriptive of the fact that the flower stem shoots up, bursts into full bloom in only a few days—and is unclothed by any leaves. The soft pink flowers in large umbels are of exquisite beauty and spicy, intriguing fragrance. Valuable for cutting.

**Culture.** It is best to transplant in July but we have bulbs dug before blooming that can be held back until (possibly) Sept. 10. Order at once. Late orders will be filled with bulbs that have bloomed as they can be moved until foliage has begun to show. In the south plant in garden with top of bulbs a little below surface. Amaryllis are very hardy for this class and will recover easily from 12° of frost. They may be grown as far north as Washington, D. C. or Vancouver, B. C.

They are not very successful as pot plants but will bloom the first year and one flower stalk is well worth the cost of the bulb.

**A. belladonna major.** Earliest, pure pink, 25c. Larger, 35c. Jumbo size, 50c.

**A. belladonna minor.** White throat. Later flowering. 50c.

**A. belladonna, var. Ethel.** This name is not intended to be permanent. We grew the seedling nearly 10 years ago, named it, and later decided it was too much like others to justify the name. It may be one of the scarce varieties from Europe or Australia. We will use this name only until identified. It is like minor in size, time of flowering, etc., but the color is a dark rose with white throat which turns rose. Very beautiful. \$2.00 ea.

**Clivia, syn. Imantophyllum.** Altho easy to grow and to flower by the amateur, they will always be classed with the aristocrats of flowering bulbs, because the flowers easily place them there. Also they increase so slowly by division that the chief method must be thru the freely produced seeds. But a Clivia requires at least five years and usually seven, to flower from seed. This time involves expense. They can never become very cheap.

Clivias have evergreen, strap like foliage somewhat resembling that of Hippeastrums.

The flowers are produced in umbels of 10 to 25, in rich and exquisite tones of orange, in March and April. When not in flower the deep rich green foliage and later the red fruits are most ornamental.

**Prices.** Recently our prices have been reduced to one-half our original price of \$5.00 each for Clivia hybrids. This reduction is below the recognized value of a good Clivia. We had too large an investment in Clivias and too much expense was required to keep them up, for the volume of sales. Not everyone will or can pay \$5.00 for one plant. In the spring we warned our customers to expect an increase in price. We still have a very large stock, and we can put off the date of a considerable price increase a little longer.

**Clivia miniata hybrids.** Foliage much like species miniata tho some are broader. Flowers wide open, erect and much like miniata except that the colors vary somewhat, while miniata has but one color. These plants are not labelled for color so we cannot give you a choice of color. A few are dark orange, others are white with border of light orange. The majority are soft orange toned pink of great beauty. Largest plants \$3.50 ea. Large, \$3.00 ea. Medium blooming size, \$2.50. Other smaller sizes at 75c and \$1.50 ea.

**C. nobilis hybrids.** These are a fine European strain. The foliage is broad and blunt at apex. Flowers large and ranging in color from apricot orange to red orange. Price, large plants, \$10.00 each.

**C. miniata.** This is the more common species but it is an outstanding

plant in any collection. Flowers are soft yellow orange. Top size, \$2.00 ea. A good blooming size, \$1.00 ea.

**Note.** No *Clivias* of any size are guaranteed to flower the first year after moving. They usually do but the only sure way is to pay more for one in bud to be delivered in March. The price is 50c above the price of the largest size except for *C. nobilis* hybrids. The price of these in bud is \$13.00.

**Cyrtanthus** are closely related to *Zephyranthes*. Bulbs and plants are about the same size but the flowers are long and tubular. Their most vigorous growth and flowering is in the winter, tho a few flowers are produced thru a large part of the year. They may become semi-dormant in mid-summer when hot but should not be dried off much. They like rich soil and respond to barnyard fertilizer.

The winter flowering habit make *Cyrtanthus* very desirable in southern gardens and for growing in pots in the north. Useful for cut flowers.

**Cyrtanthus angustifolius.** Orange red flowers. 50c.

**C. lutescens.** Bright yellow tubular flowers. 35c.

**C. mackenni.** Clear ivory white flowers on a larger plant. 35c.

## Daffodils

This name for all *Narcissi* has the authority of the British Royal Horticulture Society. They are universal garden favorites. They belong to the *Amaryllis* Family.

**Culture.** All Daffodils except the *Polyanthus Narcissus* are hardy both in the mild climate of the south as well as in the colder northern states. In the north especially it is best to plant the bulbs rather deep where the frost does not reach. Six inches is about right. Smaller bulbs like *Jonquils* may go more shallow and be mulched. In California too and all the south there is an advantage in deep planting. We plant the *Trumpets* at least 4" deep. Plant September to November. *Poeticus* very early. All do well in pots.

Sandy loam is the best soil, but any good rich garden soil will do. The addition of thoroughly decayed manure is a help. Use no fresh manure. The addition of lime to the soil is good, and necessary if leaf mould is used, as they need a mildly alkaline or neutral soil.

## Trumpet Daffodils

**Please note:** At the following prices bulbs are mailed, postpaid. Except that the prices "per 100 not prepaid" are shipped by express and you pay this charge on receipt of bulbs.

**Emperor.** Rich golden trumpet, petals lighter, good grower and free bloomer. 10c ea. 85c doz. 100 for \$5.00 not prepaid.

**King Alfred.** The favorite of all low priced Daffodils. Large deep golden yellow. 10c, \$1.00 per doz. 100 for \$6.00 not prepaid. No. 1, round bulbs (usually more flowers per bulb), 15c ea. \$1.25 per doz.

**Olympia.** Golden yellow with frilled trumpet. Hardy and easy to grow. 10c ea. \$1.00 per doz.

**Robert Sydenham.** Superb heavily frilled trumpet of golden yellow with symmetrical soft yellow perianth. A very large flower of rugged, well proportioned beauty. 15c ea. \$1.50 doz.

## Incomparabilis Daffodils

**Crocus.** Petals pure gold with deep red crown. The best at a low price. 25c ea. \$2.50 doz.

**Helios.** Extra early. Large yellow flower with orange yellow crown. 25c ea. \$2.50 per doz.

**Homespun.** Soft yellow petals, richly colored crown. 8c ea. 65c doz. \$5.00 per 100 not prepaid.

**Sir Watkin.** Petals and trumpet pure yellow. 8c ea. 75c doz. 100 for \$5.00 not prepaid.

## Barri Daffodils

**Barri Conspicuous.** Perianth yellow. Cup edged scarlet. Best known Barri. 5c ea. 50c doz. Per 100 \$4.00.

**Diana Kasner.** Pure white petals and fluted yellow cup with blood red frill. Fine forcer in pots. 30c ea. \$3.00 per doz.

## Leedsi Daffodils

**Crystal Queen.** Pure white petals, crown, primrose fading white. Leader in this class. 10c ea. \$1.00 doz.

## Poeticus Daffodils

Poets Narcissus, loved by poets from Virgil to Tennyson, have white petals with a red edged cup, a contrast that gives distinction. Altho they bloom late they must be planted very early. Some are not too easy to grow but these are.

**Horace.** Conspicuous red eye. Free flowering. 10c ea. \$1.00 doz.

**Recurvus.** Pheasant's Eye Narcissus. The variety known by the poet Virgil. 8c ea. 65c doz.

## Polyanthus Narcissus

The "cluster flowered." Hardy only in mild climates, but unequalled for pots in the house. Highly perfumed. May be grown in bowls of fiber or held up by pebbles in a dish of water.

**Chinese Lily.** White with yellow eye. Blossoms Dec. to Jan. 10c ea. 85c doz.

**Grand Monarque.** White with primrose eye. 10c ea. 85c doz.

**Paper White.** Pure white, earliest. 8c ea. 50c doz. \$4.00 per 100 not prepaid.

**Soliel d'Or.** Petals pure deep golden yellow, cup brilliant orange. Makes brilliant effect in the garden here in Jan. Equally fine in the house and goes right on blooming even at 20° F. The most desirable in this group. Special price, 8c ea. 60c doz. \$4.75 per 100 postpaid. Larger size, same price, charges collect.

## Poetaz Hybrids

Hybrids between the Polyanthus and Poet's Narcissus. Hardy and fine in pots or garden.

**Aspasia.** Pure white, yellow cup. Best in this color. 10c ea. 90c doz.

**Orange Cup.** Pale yellow, with deep orange cup. 10c ea. \$1.00 doz.

## Jonquils

They look like small Trumpet Daffodils, with about three flowers on a stem. Exquisite. Very hardy and rapid multipliers. Fine for potting. A most alluring and distinctive fragrance.

**Campernelle.** Improved pure yellow. 10c ea. 85c doz.

**Golden Scepter.** A new Jonquil-Daffodil hybrid. Flowers 3" across. Late deep jonquil yellow. 25c ea.

**Jonquilla simplex.** The smallest. It has two or three perfectly shaped, tiny Daffodils of pure rich yellow topping a 10" stem. It is the sweetest scented of Jonquils, but never heavy like the scent of the Polyanthus. Forces well in pots. Special price, 5c ea. 50c doz. Per 100, \$3.50 postpaid.

**Narcissus Special.** Many bulbs are left in the field when digging. Sometimes labels are lost. We have assembled these unnamed ones. They are mostly the less expensive ones like Paper White and Soliel d'Or. In fact you might get only those but there are quite a few better sorts including Large Trumpet types, etc. These are the prizes that some of you draw. It's a gamble. Price, 30 for \$1.00.

**Elisena longipetala.** Rare Peruvian amaryllid. Bulb and plant much like *Ismene*, *Hymenocallis calathina*, and culture the same. The flowers are much prettier, being pure white with long petals. It may be grown in the north easily, like *Ismene*, by the *Gladiolus* method. \$5.00 each.

**Eucharis grandiflora.** Pure white. Exquisite beauty and fragrance. Evergreen. Difficult to grow and still more, to flower. For pots only, in sandy loam, rotted cow manure, leaf mould or peat. Add a little bone meal. pH

should be about 6 or 6.5. If above that add more peat. Slight shade. Minimum temperature 50°. \$1.50.

**Haemanthus coccineus. Blood Lily.** The rather flat bulb sends up an attractive red mottled flower scape in September, topped by an umbel of many small, closely spaced, red flowers, 4" across. Later two wide leaves appear and lie flat on the ground. In the late spring these die and the plant should then be allowed to dry off completely. Easy in pots in the north. As they like acid soil use equal parts of peat or leaf mould and loam that is sandy enough to feel gritty. Bulbs available only until Sept. 15. Seldom flower the first year if planted after Sept. 1. All *Haemanthus* are very tender and can be grown outside only in So. California and Florida. Price \$1.00 ea. Extra large \$1.50.

**H. puniceus.** This species is much smaller and is very easy to grow. It makes an attractive pot plant and is evergreen. The smaller umbel of salmon flowers are born on a mottled 12" stem. A cluster of bright red fruits containing the large seeds follows the flowers. We listed this species formerly as probably *H. Lindenii*. Delivery any time. \$3.00 ea.

**Hemerocallis. Day Lily.** Among the most popular and well known perennial plants. They have been classed under the Lily Family but recent botanical writers place them with the Amaryllis Family. Flowers range in color from dark bronzy red, orange to yellow and are lily like in form.

**Culture.** They are hardy everywhere, surviving even coldest winters. Altho they do well in any type of good soil they prefer a rich and moist loam and partial shade. Divide the clumps when too crowded. The list includes a few species and some of the better hybrids. Delivery when dormant in late fall.

**Hemerocallis Calypso.** Large, fragrant lemon yellow flowers in July and August. 3½' tall. Night flowering, 35c.

**H. Crown Prince.** Color like Mikado. Smaller plant. Special, 25c.

**H. Dauntless.** Pale cadmium yellow, greenish throat and delicate fulvous red in center of petals. 2½'. July-August. \$2.00.

**H. fulva.** Orange flowers in July-August. 25c.

**H. Geo. Yeld.** The largest, a huge flower on a 4' stem. Blend of buff, apricot, orange and terra-cotta. 75c.

**H. kwanso.** The double fulva. Orange, 20c.

**H. Margaret Perry.** Brilliant orange-scarlet. 4'. July-August. 35c.

**H. Mikado.** Orange with large mahogany red spot in each petal. 3'. June-July. 75c.

**H. Radiant.** Rich orange. 75c.

**H. Soudan.** Clear lemon yellow. Broad petals with wavy margin. 3'. July. \$1.00.

**H. Vesta.** Deep orange with gold sheen. June-July. 75c.

**H. vulcan.** Large flower of darkest maroon red. Rare. \$2.50.

**H. Wau-bun.** Light cadmium yellow, lightly sprinkled with fulvous red. Ranks near top of the best. 3'. July-August. \$1.25.

**Hippeastrum or Amaryllis.** Botanists have recently revised the nomenclature and this genus is now *Amaryllis* rather than *Hippeastrum*. This conforms to the name that has always been commonly used.

*Amaryllis* are probably the most popular of all bulbs for growing in pots. Their vivid colors of red, scarlet, rose and nearly white, in large, round, wide-open flowers are most attractive in the window of a living room from January to April. The first hybrid, *Johnsonii*, is still one of the most popular. It has been a favorite potting bulb for much over 100 years and is grown extensively in the south in gardens. It was the first bulb I ever owned (in 1898) and it made me an *Amaryllis* lover and a bulb grower.

Be sure to read carefully our culture advice under *How to Grow Amaryllis*. If your own method is successful, do not change it. But if you fail to obtain the best success, and many do fail, our discussion may point out your error. In the 44 years of growing them, we have not yet learned all but we are able to grow good bulbs and flowers.

The ideal *Amaryllis* have fine clear colors in an endless variety of tones. If you were to buy 500 of our mixed colors you would not get two just alike. There should be little or no green in the throat. Personally we like the solid colors, without stripes or white throat the best and many of ours are like that,

but contain for variety many stripes and variations since most people seem to prefer that. The texture of the petals should be smooth, not ridged or crinkled.

Perfection of form is more desirable than large size. I admire an 8" round flower of good form and texture more than I do a 12" flower with narrow pointed petals. The Diener hybrids have the largest flowers and are favorites of those who want large size but our Select Strains have more perfect form and color tones.

We are frequently asked for pure whites. There are a few, not many, in our Select Strains, especially the White Backgrounds. Please note that the four color classes sold under this name are not perfectly classified. The classification was based mostly on the color of the parents and many of these were not large enough to flower last year. So, under reds you will get a few that are pink, scarlet, rose or even white backgrounds. We have even found pure white ones under the colors. Others are almost pure white.

Pure White Amaryllis sold as such would cost \$5.00 to \$10.00 ea. They are more difficult to grow in the garden but do very well in pots.

We do not make separate classifications at present for self colored reds, scarlets, pinks or rose. There are many of these in our mixtures but to offer them separately one would have to charge at least double our price for the assorted Reds, Scarlets, Rose, etc. If you buy a dozen or more you are very likely to get one or several that are a solid color. We would like to have every one of our estimated 25,000 customers grow from a dozen to 100 of our Select Hybrids (or as many as space allows), and every one a member of the American Amaryllis Society.

I would like to have you make crosses on our best bulbs and grow seedlings. It would not hurt our business because you need our bulbs to grow the seed as we do not sell our best seed. We plant it. To encourage you we will tell you how it is done. Place pollen, a powdery substance, from the outer stamens which are just inside the petals, on the central stigma. The stigma is a knoblike organ at the end of the filament or stalk above the ovary and all are parts of the pistil.

This process is called pollination. If successfully accomplished, a seed pod will form and after a few weeks will ripen. It is ready to pluck just as the pod starts to burst open. Lay it away a few days and when seeds have fully burst out they may be planted in good potting soil and covered  $\frac{3}{4}$ ". Do not delay planting the seed too long as old seed does not always grow.

Pots of seed may be watered once and if covered by a pane of glass the seeds will come up without further watering. Then remove glass and sprinkle the seedlings lightly with a syringe every day. Give the seedlings half shade and keep them growing. Often they flower in two years if transplanted into only 3 or 4 to a 5" pot when the seedlings begin to be crowded.

Plant breeding, as an intellectual hobby, will bring you much pleasure and many surprises. Often, amateurs have done very valuable work. Good seed can only rarely be bought. It is better to grow your own as most growers plant their own best seed. Old seed does not germinate well.

**Hippeastrum Hybrids.** Assorted colors. These are selected from a variety of sources. No poor flowers. 50c ea. \$5.00 per dozen. Extra large bulbs, 75c ea. We recommend the Select Strains as superior.

**H. Near White Hybrids.** Some have very light pink markings, others heavier but none heavily marked. They give the general effect of a white flower. This is a very vigorous strain unlike the pure white. Rich, spicy fragrance. Rather later in blooming. 75c ea. \$7.50 per doz.

**H. Hybrids, Select Strains.** This lot is composed of the best of the Howard and Smith and other American and European breeders. We consider this the best commercial strain now available. The petals are nicely rounded, in a perfectly moulded flower. The colors are refined and in countless tones from white background with light markings to various tones of pink, rose, red and scarlet. The flowers are large, sometimes 8" or more in diameter. We offer these in the following color classes. **Assorted Colors; White Backgrounds**, from nearly white to medium markings; **Red Shades**, many are pure self colors; **Scarlet; Pink**, which includes many shades of rose and other pink tones. Be sure to order as H. hybrids, Select Strains, Assorted Colors, White Background, Red,



Scarlet or Pink. Price, all colors, in blooming size bulbs, 2½" to 3", 75c ea. 3 for \$2.00. (N.B.: If you prefer, you may have Howard and Smith strain.) We offer these in large bulbs from 3" up in all colors, except pink, for \$1.50 ea.

**H. Diener's Hybrids.** These are Diener's latest improved hybrids, posthumous, grown from seed of his own crossing and selection. Diener worked for largest flowers and the everblooming habit. He claimed some as large as 16" diameter. They are the largest and the most profuse bloomers, tho we personally consider them too large. The stock of these posthumous bulbs is very small. No color selections possible. Large bulbs, price \$1.50 ea. Giant bulbs 3½" or over, \$2.50.

**H. ambiguum.** Has a tall scape with an umbel of 5 to 7 flowers, pure white with lines of pink. Very sweet fragrance. Rare. These Costa Rican natives were brought to California before 1875. \$3.00 ea.

**H. johnsonii.** This old hybrid is the one most often seen in southern gardens and is a favorite for potting. The rich deep red flowers, with broad, contrasting white band through the center of each petal, stand out in the garden. It is one of the hardiest, easiest to grow and most rapid in increase. 40c. Extra large, 50c. Jumbo bulbs, 60c.

**H. Lady Helen.** A new hybrid by W. E. Rice. Originator's description. Capsicum red, self colored (by R. H. S. color chart). \$6.00.

**H. Sibyl Houdyshel.** Pure white with a narrow pink line on border, flushed and lined pink in throat. Very fragrant. Sturdy grower and propagator. Luther Burbank origination. One of the oldest American originations and as a distinct variety is rare and costly. But there are some in our Select Strain, White Backgrounds, that are larger and better in form. Price \$6.00. No small bulbs are for sale. No Wholesale discount.

**McCann's Double Amaryllis.** As double as a rose, with often 20 or more petals. Shades of red or scarlet. This type is sometimes difficult to grow and your success is not guaranteed. Try very sandy soil. Small blooming size, 90c ea.

The following group belongs to the sub-genus Habranthus and are sometimes listed as Habranthus advenus, robustus, etc.

**H. advenum. Ox-blood Lily.** This is a fall bloomer and winter grower. Small dark red flowers in an umbel of 7 or 8. Very hardy and will stand at least 12° below freezing. Probably safe to plant quite far up toward north. Plant 6" deep, full sun. It should be planted in every garden in the south and middle-south. On the coasts, north to Vancouver and N. Carolina. 25c ea. \$2.50 per doz.

**H. brachyandrum.** Rare. Has a single-flowered umbel. Bright, deep, lavender pink. S., \$1.00. L., \$1.50 ea.

**H. robustum.** Sometimes, in error, listed as a Zephyranthes. Has one large lilac pink flower. 15c.

**H. texanum.** This name may not be correctly determined as we have two types. One has broader foliage and the flowers and shape of bulb differ slightly. Small plant with yellow flowers in mid-summer. State whether you want the broad or narrow leafed type. Both for 45c. Price each 25c.

**Hymenocallis.** This genus includes the Spider Lilies and Ismene. The Ismene is deservedly one of our most popular bulbs but few know that new improved forms and hybrids have been produced. The almost ethereal beauty and the fragrance of **Spider Lilies** is known by few.

**Culture.** Hymenocallis are hardy in southern gardens where temperatures do not go lower than perhaps 15° above. Some will endure zero or colder but not the strictly tropical sorts. All do exceedingly well in pots or tubs. Both Spider Lilies and Ismene in the north may be grown outside in the summer and dug and stored in winter, the Gladiolus method. Glads themselves are tropical and no more suited for the north than these. The Ismene is even grown commercially in the north. Plant Ismenes 4" deep, 6" apart. Smaller species not so deep.

**Hymenocallis calathina.** The Ismene or Peruvian Daffodil. Large white flowers, veined green with a daffodil-like cup. Very fragrant. Jumbo size, 35c. Large 25c. M. 15c.

**H. calathina minor.** A very tiny *Ismene* not one-fourth as large as the type. Of interest at least to collectors, and useful in small arrangements. This name is our own for a plant sent to us by a collector. 60c ea.

**H. calathina, "Advance."** 2' tall. Larger, whiter and more flowers. \$1.00 each. This and the next four varieties are rare *Ismene* Hybrids.

**H. festalis.** *H. calathina* X *Elisena longipetala* hybrid. A more graceful form and pure white. Exquisite. \$2.00.

**H. festalis Triumph.** A further improvement, with immense flowers. \$3.00.

**H. Olympia.** The largest of all *Ismenes*. A creamy white. \$5.00 ea.

**H. Sulphur Queen.** *H. calathina* x *amancaes*. A yellow *Ismene*. \$1.50.

**H. Galvestonensis.** Texas Spider Lily. Probably hardy as far north as Tennessee or farther, if planted as deep as 6" to 10". Said to be a dainty, graceful flower in its habitat, but not the equal of the two following tropical species. Moves easily but established itself slowly. 25c.

**H. species No. 1.** A small Spider Lily easy to grow in the south. In the north it is grown by the *Gladiolus* method. Blooms more freely after large clumps are made. Plant close. Bulbs bloom easily in pots. 15c.

**H. species No. 2.** One of the best tropical species. Flowers large in a many flowered umbel. Fragrant and very beautiful. Will endure temp. of 20°, probably lower. Blooms well in pots or tubs. Can be dug and stored in north. 50c ea.

**Leucojum aestivum.** Quite hardy in north. Blooms early, often before snow is gone. Dainty white flowers, each petal tipped with a green dot. 10c. Per. doz., 50c.

**L. sp. unknown.** Probably two species mixed. They have much larger bells and 5 to 7 in each umbel. Our best species. 20c ea. \$2.00 per doz.

**Lycoris.** Fall blooming *Amaryllid*. Hardy well up into middle south. *Radiata* and *aurea* do not lose their foliage at 20°, and might stand lower without injury. *L. squamigera* and *L. incarnata* are quite hardy in the north.

**L. aurea.** Golden Spider Lily. Very rare and one of nature's most gorgeous flowers. Deep gold. Plant about 4" deep. Prefers sandy soil. These came from Japan and are now almost unobtainable in America. We have a very few for \$2.50 ea.

**L. incarnata.** Flesh colored flowers with reddish markings. \$2.50.

**L. radiata.** Red Spider Lily. This is one of the south's very best bulbs. A bed of them in bloom will catch and hold the attention in any competition by other flowers. Large umbels on 12" stems of the most vivid coral red flowers with long, undulated and reflexed petals and very long stamens. One of the easiest bulbs to grow. Hardy to North Carolina. 25c ea. Jumbo size 35c.

**L. squamigera.** The famous hardy *Amaryllis* Halli. The flower umbel without foliage resembles *Amaryllis belladonna*. Color, lilac pink. Plant 4" deep and mulch in the north. Every northern garden should have them. \$1.00 ea. \$10.00 per doz.

**Nerine.** One of the most beautiful of the *Amaryllids* but few know them. There are, or were good stocks in Europe, but very few in America. They are autumn flowering, beginning here with *N. filifolia* and *N. c. fothergilli* in September to October. *N. Bowdenii* in October to December. All our species, except one, proved hardy here when we had two weeks of temperatures down to 20° and ice 1" thick. With deeper planting and in a protected place they would probably survive 16°. *N. filifolia* is the most tender and probably 22° or 24° would be its limit.

*Nerines* like a sandy loam containing much leaf mould. We add peat as they prefer an acid soil. We plant in full sun. Most species except *N. filifolia* and *Bowdenii* (which grow all summer) will become dormant about June and should receive no water until August. *N. rosea crispa*, a *Filifolia* hybrid, may be treated either way.

They are ideal pot bulbs. Three bulbs may be planted in a 5" pot and remain undisturbed for five years. They resent being disturbed and if roots are lost they seldom flower the first year. They bloom and grow better when pot-bound.

Give plenty of water when growing and occasionally liquid manure. Get

the best possible growth. When tops begin to yellow gradually reduce water. When dormant, they should remain in the full sun but receive no water.

**Nerine Bowdenii.** About 10 or more large rose pink flowers in an umbel 9" across on a 15"-18" stem or scape. One of the most choice and very easy to grow. \$1.00 ea. Extra large bulbs, \$1.50 ea. Ready January.

**N. curvifolia, var. fothergillii.** The flowers are large, and bright deep red in color. Very rare in America. Delivery until Oct. 1. \$1.50.

**N. filifolia.** The smallest Nerine. Evergreen foliage with dainty pink flowers. Moved any time of year. They must be crowded to flower well and as many as a dozen may be planted in a 5" pot. They increase very rapidly and hence a low price is possible. Three for 25c. 90c per doz.

**N. rosea crispa.** A hybrid with flowers resembling *N. filifolia* but in a larger umbel on a scape 15" or more tall. 30c. Largest size, 50c.

**Pancratium maritimum.** Very fragrant white flowers, in shape like an Ismene but pure snow white. Culture simple. Plant them 4" deep and watch them grow. Hardy in middle south. 15c.

**Sprekelia formosissima superba.** We found this variety (described and named by Hayward in 1938 *Herbertia*) in an old California Garden. The flowers are about twice as large as the common type, a lighter and more pleasing red color. The foliage is evergreen and the flowers are so freely produced thruout the year that it almost deserves the title of an ever-bloomer. However, it is unlikely that a single bulb would bloom more than about four times in a year. We call this the Orchid amaryllis because of the orchid-like shape. I believe this may be Burbank's hybrid "Martinique" which I saw in 1913 but was thought to be lost in cultivation. Jumbo bulbs, 75c; M., 50c; S., 35c.

**Stenomesson variegatum.** The flowers are in a numerous umbel, long, cylindrical and drooping. We have never seen the flowers and an accurate description is impossible. But they are said to be red or golden for most species. They require soil about as for *Amaryllis*, and about half shade. They are summer growing and should be potted in the fall and kept dry at a temperature never below 45°. As our winters are very wet and temperatures are down to about 30° every winter it is improbable that we can flower them in So. California in the garden. Collectors should try them in pots as they are thrifty, strong growers and easy every way except to flower. That also should be easy in pots. Large bulbs, \$7.50; M., \$5.00; S., \$3.50.

**Sternbergia lutea.** A small, yellow flowering, winter growing *Amaryllid*, often called "Fall Crocus." Culture like others of this type. Plant 3" deep. They are only a little short of winter hardy in the north and should succeed in protected situations in warmer sections of the middle south as far north as Philadelphia. Stocks of *Sternbergia* are difficult to obtain and ours is limited. They must be ordered before Sept. 10 as on that date we expect to plant all on hand. Extra large jumbo bulbs 50c. L. 35c. M. 25c.

**Tulbaghia violacea.** A close relative of *Agapanthus*, but small enough to plant 3 in a 5" pot. Flowers are mauve to Chinese violet in an umbel on 24" stems. Begins soon after planting and blooms almost continuously through the year—winter and summer. Foliage has garlic odor when bruised. 35c, three for \$1.00.

**Zephyranthes rosea.** The smallest. Pure pink flowers. Usually *Z. grandiflora* is sold as *Z. rosea* but this is the true species. Use plenty leaf mould or peat as they need acid soil. 10c.

**The Alliae.** This group is now placed in the *Amaryllis* family. Sandy loam is preferred. Do not add too much leaf mould and no peat as very acid soil is not so good. Plant about 2½" deep. The species *Allium* are onions and should be grown in full sun unless noted.

**Allium neapolitanum grandiflorum.** Large and attractive umbels of white flowers used for cutting. Forces well in pots. Hardy only in mild climates. 6c ea. 60c doz.

**A. sativum.** Burbank's Elephant Garlic. This is the largest and sweetest garlic and the easiest to peel. It often makes solid bulbs about 2" in diam. Others divide into very large cloves. Clusters of bulblets form at base like a

gladiolus. The flower and plant is an ornament in the herb garden and a delicious flavor in salads and other proper places. Each 15c.

**A. Schoenoprasum.** True Chives. Lovely little plants with lavender flowers, used for edgings in the flower or herb garden and add zest to salads, stews, etc. 10c. 4 for 25c.

**A. senescens.** Erect strap shaped leaves. Deep lilac flowers in a dense globular umbel. Very fine bloomer. 10c.

**A. sp. Oriental Garlic.** A pretty Allium with white flowers. An ornament in the garden, indispensable in an herb garden. Leaves give a most delicious flavor to salads without the long-lasting high-powered after effect of garlic. In north, winter the plants in pots. They would probably grow in pots in the window all winter. Plants 25c ea.

**A. triquetrum.** Much the finest white flowering allium, I think. The many large flowers in a large umbel are rather drooping. It does well in full sun like most alliums but even better in partial shade. 10c.

**Broadiaea.** These natives of western America are hardy in both north and south. **Culture.** They may be grown in pots like Freesias, in a cool room. Fine in the rock garden with ferns, columbine, etc., or for naturalizing. Plant 2" deep in any soil or situation but they do best in a gritty soil and light shade. Do not dig until necessary to thin them. Spring flowering. Our bulbs are cultivated bulbs, not collected, hence are larger, better and cost a little more.

**Brodiaea Californica.** One of the largest with stems up to 2½' tall. 2½", rose purple flowers, in umbels of 10 to 20. Late spring. 15c.

**B. capitata.** **California Hyacinth.** 18" tall, up to 20 flower stems per bulb. Planted early they bloom in six weeks. Violet blue flowers from October to April. Fine in pots. 7c ea. 70c doz.

**B. coccinea.** (**Brevoortia Ida-Maia**) **Floral Firecracker.** Vivid red flowers. Firecracker shaped. Easy and fine in pots. 12c.

**B. ixioides.** **Golden Star.** Large umbels of lovely bright yellow flowers. Fine in pots. 7c ea. 70c doz.

**B. laxa.** Large umbels of bluish lavender flowers on 2' stems. Prefers partial shade but does well in full sun. 15c. \$1.25 doz.

**B. uniflora.** (**Triteleia uniflora**). Lovely porcelain blue flowers on a low plant. Chiefly grown in pots in north but hardy outside except in coldest states. It is useful for edgings, in the rock garden or scattered in the lawn. 5c ea. 50c doz. Per 100, \$3.00.

**Leucocoryne ixioides odorata.** **Glory of the Sun.** New. Large, fragrant and very beautiful flowers in the early spring. Flowers are prized by florists and expensive. Cheaper to grow your own. **Culture** like Freesias. 4 or 5 may be planted in a 5" pot. 10c ea. 90c doz. Per 100, \$7.00.

## IRIS FAMILY. Iridaceae

The Iris is the type genus of this family. The following, from Gladiolus, and including *Moraea* and *Homeria* belong to the Iris Family.

### Gladiolus

Gladiolus are the favorites of all flowers for cutting. More of them are grown for florists' use and more are grown in private gardens for home decorations than any other flower.

**Culture.** Glads planted Nov. 15 to Mar. 1 in Southern California and thruout the south (a little later in Northern California and early as possible in spring in the east) are reasonably sure to escape the attack of thrips. But Glad bulbs must be early matured and early dug or they will not start early or bloom early. Our Glad bulbs are especially grown for this purpose, matured early and dug in August.

But if you plant recently dug bulbs you will gain nothing; they will continue their rest of three months before starting.

**Thrips** are very small insects that suck the juices from the plant. They cause the flowers to wither or appear burned, and appear only after weather becomes warm.

To avoid the damage they do, three measures are effective: Plant early;

plant clean, treated bulbs; keep them always wet by overhead sprinkling. Gladiolus that are sprinkled one-half hour every evening by a continuous spray will seldom show thrips damage at any time of year.

**Treating bulbs.** Mix 4 teaspoonfuls of Lysol in one gallon of water. Soak the bulbs 6 hours in this solution. It may be used several times but not after standing over one week. This is an acid solution and encourages root growth instead of delaying it. The bulbs will start more quickly.

Do not treat bulbs bought from us. We treat before selling.

**Plant 4" deep; small 3"; bulblets 2".** Twice their diameter apart. We plant two rows, staggered in a 4" wide furrow. Rows about 20" apart. Alkaline soils produce poor Glads. Soil should be neutral to mildly acid. Leaf mould or peat added is useful. Peat causes soil to dry out more rapidly and imported peat is hard to get. Domestic peat is often harmful because alkaline. Use no fresh manure. Top mulch of leaf mould or imported peat is fine.

Keep Glads growing with plenty of water and best culture for at least two months after flowering. Longer is better for this is the period when new bulbs for next season are developing. It is best to dig bulbs in the south, and necessary in the north.

**Fertilizers.** Use only Superphosphate, a small handful to 6' of row, in furrows on both sides, after plants are about 1' high. Apply about once a month. Try a short space first. If it burns, use less.

**Explanation.** In this list L. means large, 1 1/4" diam or over. M. means medium, 3/4" to 1 1/4". S. means small bulbs, blooming size. If watered very freely small bulbs produce good spikes. We have seen 1/2" Los Angeles bulbs make plants 5 ft. high by daily sprinkling. Large bulbs bloom earlier and throw more spikes. Prices are for one bulb. A dozen, all of one variety, costs ten times the price of one, unless otherwise stated. Not less than 6 (all of one variety), will be sold at dozen rates. 100 Bulbs of one sort are sold at 70 times the cost of one, unless quantity prices are otherwise stated.

California customers must add 3% sales tax to these prices.

Orders for Glads will be filled in Nov. or early Dec. in time to plant for earliest spring flowers. We suggest that you order at once as we fill them in rotation. Remit with order as we cannot notify you to remit when ready.

**Substitution.** When we are sold out of one of the varieties ordered we usually substitute a variety as nearly like it as possible, giving equal or greater value. If this does not meet your approval please say, "Do not substitute."

**Aida.** Deep violet blue. Early, large flowers, tall, good grower. L. 7c.

**Albatross.** Very large pure white. Tall. L. 6c. Per 100, \$3.50.

**Allemania.** Immense rosolane purple (or orchid) flowers on very tall spike. The most gorgeous of all Glads. Plant deep. L. 7c. Per 100, \$5.25.

**Annie Laurie.** Ruffled rose pink. L. 5c. M. 3c.

**Ave Maria.** Early, large, tall, near-blue. L. 5c.

**Bagdad.** Fine large, tall, smoky old-rose. L. 5c. 100 for \$2.00.

**Betty Co-Ed.** Soft creamy pink, like a school girl's complexion. A small glad that's fine for cutting. L. 5c. 50c doz. Per 100, \$2.00. M. 25c doz. Per 100, \$1.00. S. 15c doz. Per. 100, 85c.

**Betty Nuthall.** Early, orange, pink, yellow throat. L. 5c. Doz. 50c. Per 100, \$2.25. Med. 25c doz. Per 100, \$1.25.

**Bill Sowden.** Rich deep red. Very large and extra fine. L. 5c. Per 100, \$3.00.

**Blue Danube.** Amethyst blue, darker throat. 7c.

**Chas. Dickens.** Tall, fine radiant purple. 8c.

**Com. Koehl.** Immense, glowing scarlet. L. 6c. Per. 100, \$4.00.

**Debonaire.** La France pink with shrimp pink and cream throat. 7c.

**Dr. F. E. Bennett.** Flame red. One of best and easiest to grow. Favorite for cutting. L. 5c. Per. 100, \$2.50. M. 25c doz. Per 100, \$1.35.

**Dr. Moody.** Early large lavender pink. Better and brighter than Minuet. L. 6c. Per. 100, \$3.50.

**Faust.** Colors indescribable. Ground color geranium pink. Outer part of petals heavily overlaid with slate to deep livid purple. L. 8c.

**Gate of Heaven.** Purest rich, deep yellow. Ruffled. Well named. L. 6c.  
Per 100, \$4.00.

**Georgette.** Fine rose pink. 8c.

**Golden Dream.** The favorite tall deep yellow. L. 5c. Per. 100, \$3.00.

**Kirchoff's New Violet.** The best of this rare color. L. 7c.

**La Paloma.** Very early, bittersweet orange. Vivid color. L. 5c. Per 100, \$3.00. M. 25c per doz. Per. 100, \$1.25.

**Lavender Delight.** Delightful and unusual color, rose purple. L. 6c.

**La Verne.** Tall, large creamy yellow, flushed pink. Purple throat blotch. Vigorous. L. 5c. M. 25c doz. 100 for \$1.00. S. 15c doz. 100 for 75c.

**Libelle.** Heliotrope blue. The loveliest blue. L. 6c.

**Los Angeles.** Orange, tinted pink. One bulb produces more flower spikes than any other. Best winter grower. Such a rampant grower that it should be planted not closer than 6" for large bulbs. Also give more water for best flowers. L. 5c. 50c doz. Per 100, \$2.25. M. 20c doz. 100 for \$1.00. S. 15c doz. 75c per 100. Small sizes bloom beautifully.

**Margaret Fulton.** Coral pink shading to rose doree on tips of petals. L. 7c.

**Marmora.** Tall immense smoky lavender. L. 5c. Per 100, \$2.25.

**Minuet.** The favorite lavender. L. 5c. Per. 100, \$2.50.

**Mrs. Konynenburg.** Most popular deep blue. L. 5c. Per. 100, \$2.50.  
**Mrs. Leon Douglas.** Tall large geranium pink, splashed darker. Plant deep. L. 6c.

**Pelegrina.** Deep violet blue. Early, strong grower. L. 5c. Doz. 50c. Per 100, \$2.25. M. 30c doz. Per. 100, \$1.25. S. 25c doz. Per. 100, \$1.00.

**Pfitzer's Triumph.** Immense salmon-red. L. 6c.

**Pfitzer's Yellow Wonder.** Lovely soft yellow. 7c.

**Picardy.** The most popular Glad, for the garden or for cutting. Tall, extra large, shrimp pink. L. 5c. Doz. 50c. Per. 100, \$2.00. M. 25c doz. Per 100, \$1.00. S. 15c doz. Per. 100, 75c.

**Radiant Orange.** Our largest and best true orange. A combination of yellow orange, salmon orange, bittersweet orange and grenadine red. L. 6c.

**Red Lory.** Fine scarlet red with rhodamine purple throat. A fine red. L. 6c.

**Red Phipps.** Soft red. The florists favorite red. 7c.

**Rose Marie Pfitzer.** Very beautiful creamy white, suffused pink. Ruffled. A large and beautiful flower. L. 8c.

**Ruffled Gold.** A lovely ruffled yellow. L. 7c.

**Salback's Pink.** Geranium pink. 7c.

**Schubert.** Apricot with scarlet throat. 7c.

**Sonatine.** Large light pink. A good cut flower. 8c.

**Star of Bethlehem.** Large, pure white flower on a tall, vigorous stem. Considered the best white in the cut flower market. L. 6c. Per. 100, \$4.00.

**The Orchid.** Individual flowers in a corsage are easily mistaken for a catalpa orchid in both color and form. L. 7c.

**Virginia.** An old stand-by and there is no sweeter red. L. 5c. Per 100, \$3.00.

**Wasaga.** A lovely apricot. L. 5c. Per 100, \$2.50.

**Wurtembergia.** Scarlet, with cream blotch. L. 7c.

**Yellow Perfection.** Medium yellow. Some think it the best. 7c.

**Mixed Bulbs.** A lot of bulbs are mixed accidentally. Surplus sorts are added. Sometimes we discard new sorts that others like. This mixture in bulbs 1" to 1½" diam., sizes, 1, 2 and 3 are offered at 45c doz. \$2.00 per 100. M., 100 for \$1.00.

**Bulblets.** Picardy and Los Angeles, 40c per pint. Bagdad, Betty Co-ed, Betty Nuthall, Golden Dream, La Paloma, Souvenir, Wasaga. 50c. per pint. Dr. Bennett, Pelegrina. 60c pint. Fine mixture, 50c pint. Plant bulblets very close, in a 2" wide furrow. Cover 2". Plant early and keep wet.

## Baby Gladiolus

Baby Glads may be planted Oct. to Dec. Bulbs are not good keepers into the late season so it is better to have them planted before Nov. 15. They are winter growers and endure light frost. Begin flowering in Feb. if early planted

and winter is mild. Continue to bloom a long time. Lovely and graceful spikes for cutting. Thrips do not bother them in their season of growth.

**Culture.** Like large glads except they should be planted closer and not so deep. They do fine in pots in a sunny window and a cool room.

**California Peach Blossom.** Peach blossom pink flowers. The best variety of all for cutting, with larger flowers and better stems than other Baby Glads. It is also the easiest to grow and less affected by bulb rots that ruin so many sorts. Jumbo bulbs, 10c ea. 75c doz. \$4.50 per 100. L. 6c ea. Doz. 50c. Per 100, \$4.00.

## Watsonia

Close relative of the Gladiolus but winter growing and earlier in bloom. They grow as tall or taller. The flowers are smaller but in very lovely spikes useful for cutting.

Watsonias do not receive the attention they deserve. The colors are varied in most pleasing tones and bloom early if planted early. Better even the second and third years. Easy to have them for Decoration Day or before in So. Calif. In most cases we have discarded names and substituted the name of their color.

**Culture.** About the same as Glads. In the south they must be planted in early fall (September best) as the bulbs sprout early. Hardy at Washington, D. C., and probably in all climates where temperatures do not go below zero, if planted in a well protected place, 5" or 6" deep and well mulched. But this is speculative. We have had no experience. The bulbs need not be dug until too crowded. Water frequently.

**Burbank's Lavender.** Large lilac flowers. 8c. 75c doz. Per 100, \$6.00.

**Ed Sturtevant.** Grenadine or light orange scarlet. 8c ea. 75c doz.

**Giant Lavender.** Lavender, a much misused color name is near to blue. This flower is light rosolane purple (orchid). The most magnificent and stately of all. Up to 8' tall. Large flowers. 15c ea. \$1.25 doz.

**Grenadine Pink.** A little mixed. As is, 10c ea.

**Lillian Benner.** A fine purple variety. 10c. 85c doz.

**Liseran Purple.** Another "orchid" tone. 8c ea. 75c doz.

**Rose Pink.** Contains rogues. As is 10c ea.

**Rosolane Purple.** "Orchid." 8c ea. 75c doz.

**Scarlet.** 8c ea.

**Marginata.** A species uniquely different. Very tall, slender, straight spikes with small flowers surrounding the stem for as much as upper 3'. Many lavender tones. Fine in flower arrangements. 10c ea. \$1.00 doz. \$7.50 per 100.

**White.** Its pure white flowers make it the favorite Watsonia of many. 6c ea. 60c doz.

**Assorted Colors.** Several colors included in a mixture. 6c ea. 60c doz. Per 100, \$3.75.

## Iris

**Iris.** Tall Bearded Iris are rightly called the Poor Man's Orchids. They may be planted any time of the year. If you are interested in a list, priced on an economy basis at 5c each and up send for our Iris Price List. Lists both bearded and beardless Iris but use this catalog for Bulbous Iris.

**Iris reticulata.** This, smallest of bulbous Iris, is most useful for potting. Fragrant, violet blue flowers in January to February. Four bulbs in a 5" pot. Give a sunny window in a cool room. Hardy in south and in north if well protected. 25c ea. or 4 for 80c.

**Dutch and Spanish Iris** are about the same thing. They are bulbous. The flowers are fragile like the Bearded Iris and are very useful for cutting.

**Culture.** Plant in the fall. Early planting is advisable though we have planted as late as December. But late planted bulbs do not grow 100% nor are the flowers as good. Plant about 3" deep and 4" apart. We plant double rows in a furrow like glads. Plant in full sun or partial shade. They should be well watered. They are hardy in eastern states but a mulch is advisable. They like wood ashes or lime in soil, as others do.

**Hart Nibbrig.** Lovely clear blue. 6c ea. 50c doz. Per 100, \$3.00.

**Imperator.** Tall, large blue. 7c ea. 50c doz. Per 100, \$2.90.

**Poggenbeck.** Upper petals violet blue; lower, azure with yellow blotch. 8c ea. 65c doz.

**Van Everdingen.** Upper petals, creamy white; lower, light yellow with deep yellow blotch. Large 10c ea. 90c doz.

**White Excelsior.** The largest pure white. 7c ea. 65c doz.

**Yellow Queen and Cajanus.** Nearly identical. If out of one will send the other. Tall, deep yellow, small flowers. 7c ea. 65c doz.

**Mixed.** Colors included are not known but likely no yellow. Field run sizes from largest down to smaller blooming size. 25 for \$1.00.

## Freesia

Freesias combine delicious fragrance with exquisite beauty. They are indispensable in the outside garden, or the window garden, and for cutting.

**Culture.** They are not hardy except in mild southern climates. Do not plant outside where temperatures go under about 26°. Plant outdoors early, before October if possible, though they do well when planted as late as November 30. But late planted bulbs will grow short stems and smaller flowers. Plant 18 to the foot, or 12 in a single row. Cover two inches. Rich sandy loam is the best soil but they do very well in heavy soil. Give full sun exposure.

No spring flowering bulbs are more satisfactory in pots or window boxes inside. No incense, no fragrance nor beauty can be had for so little expense or trouble. Plant 2" apart in pots or boxes. Place at once in the sunniest window in a cool room. Few winter flowering bulbs like hot rooms. Do not water heavily until up. Large bulbs started early often bloom by Christmas or soon after.

Our Freesias are a larger size than last year hence some of them cost a few cents more per dozen. Others cost less.

**Apothoese.** Large flowers opening mauve lilac and turning to carmine pink. Tall. 45c doz. \$2.50 per 100.

**Golden Daffodil.** The most popular Freesia and the very best for growing in pots. Deep golden yellow. 45c doz. \$2.50 per 100.

**Golden Wonder.** Large very fine new yellow. 7c ea. 60c doz.

**Orchidea.** Soft pearly mauve with yellow throat. Tall, strong stem with 5 extra large flowers open at one time. New. 7c ea. 60c doz.

**Pink Supreme.** The supreme pink. 45c doz. \$2.50 per 100.

**Purity Superflora.** Improved Purity. Earliest, best white for forcing in pots or in garden. The most fragrant. 35c doz. \$2.25 per 100.

**Penserosa.** Enormous flowers on tall stems. Soft pink with carmine throat and markings. New. 45c doz. \$2.50 per 100.

**Rose Supreme.** Like Pink Supreme but a little darker. 45c doz. \$2.50 per 100.

**Sunset.** Vivid apricot orange. Very fine. 45c doz. \$2.50 per 100.

**White Chief.** Largest and purest white Freesia. Later than Purity. 5c ea. 50c doz.

**Tecolote Hybrids.** These are the largest Freesias ever developed. The immense flowers are borne on stems often 2' or more in height under ideal conditions. In order to get large flowers and tall stems you need large bulbs, so we offer these in assorted colors and the larger bulbs at 15c ea. \$1.25 per doz.

**Tecolote hybrids** in separate colors. Pure White, Blue, Pink, Lavender-blue, Rose-pink, Lavender-pink, Light Yellow, Bright Red. Your choice 20c ea. \$1.75 doz.

**Freesia Special.** Assorted colors. White may be omitted if you request it. 40 for \$1.00.

## Sparaxis

Intermediate between Freesias and Ixias. They are the most vividly colored of spring flowering bulbs. Large flowers on an 8" to 12" stem. **Culture,** like Freesias. Fine also in pots. They are more hardy than Freesias and can be grown in colder sections.

**Assorted Colors,** with reds predominating or with light colors predominating. Either mixture 6c ea., 45c doz.

**Bloem Erf Hybrids** (or Streptanthera-Sparaxis hybrids). Larger, taller and a greater variety of colors. Very fine. 10 ea. 75c doz.



**Streptanthera cuprea.** Very much like Sparaxis but more orange. 7c ea. 60c doz.

## Tritonia

Tritonias are very close to Freesias. They are taller and flowers are larger. The culture is the same except that being larger a little more space is given. You can plant 2½" apart in double row and 2½" deep. They may be grown in the house but also like Freesias they must have sun.

**Prince of Orange.** Looks like a huge orange Freesia. 3 for 10c. 35c doz. \$2.25 per 100.

## Ixia

Ixias grow about 28" to 5' tall. They have long, wiry stems and are nice for cutting. Altho the flowers close at night and on dark days, the long closed buds are nicely colored and are attractive either closed or open.

**Culture.** Ixias are tender bulbs and in colder climates can be planted in the early spring. If planted in protected situations and well mulched in the fall the bulbs will survive most climates.

In the north they may also be grown in a cold frame or in pots in the house or greenhouse. Give full sun. In mild climates in the south, plant early preferably. Although bulbs planted as late as January should flower well.

Plant about like Freesias but allowing more room, 12 to the foot in a double row. Use no animal fertilizer, unless thoroughly rotted.

**Ixia Bloem Erf Hybrids.** Quite distinct and different from ordinary sorts. Height 4' to 5'. White to pink with lavender and bluish tones. Flowers do not close at night. The slender spikes are lovely in bouquets. Bloom in the late spring. 7c ea. 60c doz. 100 for \$4.90.

**Mrs. Cleveland's.** Variety unknown; so labeled at present in memory of one who grew them. Color creamy white. When closed the flowers are like a long, slender ovoid, each creamy petal crimson striped thru the center. Lovely in bouquets or garden. Jumbo bulbs 6c ea. 50c doz. \$3.50 per 100. Large bulbs 40c doz. \$2.50 per 100.

**Dutch Hybrids.** The colors range through white, yellow, lavender, pink and red tones. Very fine. 15c ea. \$1.25 per doz.

**Lapeyrousia cruenta.** Often called Red Ixia or Scarlet Freesia. They do not come as tall as Ixias. They have very nice, soft red flowers that do not close at night or on cloudy days. **Culture** like Ixias and Freesias. Easy in pots in sunny window. 5c ea. 35c doz.

## Babiana

Related to Freesias, Tritonias, etc., but quite distinct in appearance. Usually 8" or 10" tall, with pretty plaited leaves. Bloom in early spring. **Culture** like Freesias. Lovely in pots. Plant 6 in a 4" pot for a sunny window. Outside for edgings and rock gardens.

**Babiana Hybrids.** Fine mixture of shades of pink, red and blue, the blue predominating. 5c ea. 50c doz. \$4.00 per 100.

## Marica

**Marica gracilis. Walking Iris or Apostle Plant.** Beautiful but fugitive 2" flowers of white and blue with yellow and brown markings in center. Sword shaped leaves are very ornamental. A very nice pot plant in north and quite hardy in south. Very oddly, the flowers are followed by a small plant. The leaflike stem bends over and plants take root, thus "walking" away from mother plant. Requires nearly full shade, plenty water. Hardy only in far south. The usual price is 50c to \$1.00. Special, 40c ea.

**M. coerulea grandiflora.** The giant of this genus. Leaves 3' or more in height. Large lavender and white flowers. Rare. This was collected for us in Costa Rica. Will survive only a few degrees of frost. Price, \$5.00.

## Moraea

The Moraea Tribe includes Moraea, Dietes and Homeria. None are hardy in the north but make very nice pot plants. Dietes can be grown in pots or

tubs in the garden in summer and wintered in light basement, soil not too dry.

The *Moraea*s are the African representatives of the *Iris*. They have a multitude of lovely and delicate flowers resembling gay butterflies on branching wiry stems. *Iris*-like in appearance. They flower through spring and summer, and some will begin even in the fall, and continue through winter if not too cold.

**Culture.** The bulbs may be planted about 3" deep and 6" apart in fall. Do well in full sun or partial shade. They are quite hardy in the south but in north the bulbs cannot be planted until very early spring. Obtain bulbs in fall and store in cellar. They do well in pots and are very unusual and attractive. In the south they are very desirable in the garden, a real "must have" item for borders or rock garden. We list only the best species.

***Moraea polystachya.*** Two foot plant covered with myriads of loveliest flowers that look like butterflies. Petals are mauve, penciled with violet and have a bright yellow signal blotch or eye. Blooms 6 weeks after planting and continues 3 or 4 months. A most desirable new bulb. L. 10c. 75c doz. \$6.50 per 100. Smaller blooming size bulbs 50c doz.

***M. ramosa.*** Similar in appearance but twice as tall and flowers are amber yellow with oval of yellow surrounded by dark blue in throat. Stream side plant that likes plenty of water. Very beautiful in pots or garden. 15c. \$1.50 per doz.

***M. ramosissima.*** Very similar to *M. ramosa* but blooms one month later and flowers are amber yellow with oval of lemon yellow with a dark line around, at base of falls. Has dark spots on claw. 15c ea. \$1.50 doz.

***M. tristis.*** Flowers 1½" across and desirable for their most unusual color. Olive green and grey, with small yellow, violet edged blotch at base of outer segments. Plant is 1' to 1½' tall, a nice size for pots or rock gardens. 15c ea.

***Dietes.*** This genus also belongs to the *Moraea* tribe, in fact they have only recently been removed from the *Moraea* and given a new generic name. *Dietes* differ from *Moraea* in having a rhizome, similar to Bearded *Iris*, and sword-like leaves. Flowers are very much like those of *Moraea*, borne on long, wiry stems thruout summer into winter. **Culture** like *Iris*.

***Dietes catanulata.*** Low growing species with waxy white flowers on a tall, perennial stem. 50c ea.

***D. Oakhurst hybrids.*** New hybrids that soon make large clumps that are very ornamental in the garden. Flowers freely in summer with a few most of the time in winter. 2" flowers on 4' stems. \$1.00.

***D. iridioides.*** White with yellow and blue markings. 25c ea.

***D. iridioides Johnsonii.*** Flowers are about twice the diameter of the type variety above. Plant more robust. True variety. 50c.

***Homeria collina*** belongs to the *Moraea* tribe. There are one or two long leaves from the base of which arises a 24" graceful stem with orange flowers that last but one day, but so plentifully produced that there is a succession for at least six weeks. **Culture** like *Moraea*. Hardy in south. In the north the bulbs may be planted in the spring but must be purchased in fall and stored in a cool cellar to retard growth. 6c ea. 50c doz.

## LILY FAMILY. Liliaceae

The type species is the *Lilium* or true Lily. Many call any bulbous flower a lily. *Crinum*s, *Callas*, *Cannas*, though often called Lilies are not.

***Lilium.*** The Lily is considered as one of nature's most beautiful creations and hybridizers have accomplished little in its improvement. Their **culture** is not difficult. They should be moved in late fall or winter, and before new growth begins. Lily bulbs are better if not stored dry for more than a very short period. When possible we furnish bulbs recently dug and with living roots attached. Plant 4" to 6" deep at once. The best soil is a deep and well drained sandy loam. It is best to place a handful of sand under bulb and another around it. Reasonably rich soil is good but use no manure or fertilizer when planting. Leaf mould, well decayed and well mixed with soil is good for them. The ideal situation is among shrubs or plants that shade the ground and keep their feet cool. But the tops like to rear themselves into full sunlight in order to keep their heads warm. Lilies need mildly acid soil. All may

be grown in pots but *L. Harrisii* is preferred. Lilies should be well protected by a mulch over winter in the north to protect the bulb from freezing.

***Lilium formosanum.*** Large white flowers. Very hardy and easy to grow. Bulbs small. 20c ea. 3 for 50c.

***L. Harrisii.*** The true Bermuda Easter Lily. These do well in S. California and other mild climates, in the garden. The flowers are the purest white of any and they are the most refined in outline and form. L. 25c ea.

***L. regale.*** Large, fragrant white flowers tinted pink, creamy throat. Bulbs increase and get better every year. Small bulbs usually give only one to three flowers but we offer large bulbs that will make tall many flowered stem. 25c ea. Small bulbs 15c ea., 8 for \$1.00.

***Gloriosas*** are very close to the true lilies. They have a tuber instead of a bulb and the plants are climbing. They must be supported by stakes and will cling to a support by tendrils at the apex of the leaves. The flowers are more gorgeous even than the *Liliums*, vividly colored, red with yellow markings, later turning deep pure red. They are equal to orchids in a corsage. The species vary somewhat in color and size of flowers and form of plant. *G. superba* is much the taller, producing more but smaller flowers. It is also the latest to come up and flowers later. *G. rothschildiana* is the earliest, *G. virescens*, next.

**Culture.** They must have sandy, well drained soil. Incorporate plenty of well rotted leaf mold. They do quite well in either full sun or half shade. In California and the south plant from early January to March. Since our seasons are long they may even be planted in May or June but earlier is advisable. In the north, with a short season of growth, start the tubers about March 1 in a warm sunny window, watering little until they come up. Shift to garden when warm. Plant the tubers horizontally about 3" or 4" deep and 6" apart. They need much water.

***Gloriosa rothschildiana.*** Very vividly colored and an outstanding plant. We sell 3 sizes. All bloom well but the larger tubers make a larger plant and many more flowers. Prices, 50c, \$1.00 and \$1.50 each.

***G. virescens.*** A more rare species. The flowers are slightly rose tinted, and tho it closely resembled *Rothschildiana* the general effect of the plant is a little superior to it. Price \$2.00 ea.

***G. superba.*** Though the individual flowers are smaller and less vivid there are many more of them and the plant will grow (from large tubers) several feet taller. Price \$1.25 ea.

## Tulips

Our Tulips are grown in America by an imported Dutchman, in Washington. This is the best climate and soil in the world for Tulips and the Dutch are the best growers. We believe our bulbs are sounder and better than imported bulbs. We do not offer top size bulbs. They are twice as expensive and break up into small bulbs the first year. Ours are 7 - 9 cm. or about 1" in diam. and they grow larger the first year, making a few offsets, instead of breaking up into many small bulbs.

We consider it advisable to use this size for bedding because of relative cost, second year performance and because this size with proper culture produces excellent flowers the first year. Our customers report 2' stems and good medium size flowers. The flowers are saleable in the wholesale flower market. But late planted Tulips from any size bulb do not flower satisfactorily. Bulbs planted in October to November do well. Those planted in early December do fairly well. Last year we planted left over bulbs in late February. Most of them grew. Practically all the Clara Butt flowered and possibly half of the others. But flowers were small and on stems only about 1' long.

Don't forget that Tulips grow underground all winter. If rains are not sufficient keep the soil moist by irrigation. Tulips kept on dry side all winter will be very poor.

**Tulip Prices.** Assorted Darwin, Cottage, Breeder and Triumph, all late single Tulips, the sorts that do well in the south and better anywhere. For the sake of brevity in advertising we call them simply, Darwin Tulips. Size 7 cm—9 cm, approximately 1" diameter. You may have assorted varieties or all Clara

Butt. 50c per doz. 25 for \$1.00. \$3.00 per 100. \$13.50 per 500. \$25.00 per 1000.

**Named varieties of Tulips.** If you prefer to have certain colors, or named varieties instead of general mixture, choose from this list.

**Red.** Boadicea, Europe, Farncombe Sanders, Gesneriana spathulata, King Harold, La Merveille, \*Pride of Haarlem, Wm. Pitt.

**Pink.** Barrone de la Tocnaye, Clara Butt, John Ruskin (yellow pink), \*Madam Krelage, \*Mozart (deep rosy pink).

**Yellow.** \*Avis Kennicott, \*Gesneriana lutea, Inglescombe Yellow, \*Moonlight.

**Bronze.** Bronze Queen, Hamlet, U.S.A.

**Other Colors.** Andre Doria (deep maroon), Bleu Aimable (blue-violet), \*Cardinal Manning (rosy purple), \*Hippolyte (deep lavender), Idyll (old rose), Orange King (orange), \*Picotee (white with pink edge), Roi d'Islande (old rose).

You may order by the colors, as Red Tulips, or by name of the variety, as Wm. Pitt, etc. If we are sold out of the variety named we will substitute another variety of similar color.

**Prices.** Single bulbs, labelled, 10c ea. in any quantity; 6 bulbs, one variety, labelled, 40c; 12 bulbs, one variety, labelled, 70c; 18 bulbs, one variety, labelled, \$1.00; 100 bulbs, one or two varieties, labelled, \$4.00; 500 bulbs, one to five varieties, labelled, \$18.00; 1000 bulbs, one to ten varieties, labelled, \$35.00.

**Prices of starred varieties 10% more.** Thus 11c ea. 6 for 44c, 12 for 77c, etc.

**Calochortus venustus.** Mariposa Lily or Calif. Tulips. Spanish settlers called them Butterfly Tulips because the flower markings are like butterfly's wings. Resemble Tulips and are closely related. Plant 3" deep (deeper in north) in well drained sandy soil to which leaf mould has been added. No fertilizer. Full sun or slight shade. Water sparingly when growing. Should have none when dormant in summer. Hardy.

Two varieties are considered best. **Citrinus**, deep rich yellow with black eye. 6c. **Vesta**, 3" to 5" flowers. White, flushed lilac. Red center. Considered the best of all. Prefers heavy soil, does well in any. 10c.

**Colchicum.** They arouse much interest because they may be laid on a table, without soil or water, and will flower thus.

Plant in a border or rockery before Sept. 10 if possible. They will flower in storage in spite of us so please order very early. They are recommended for full sun or half shade. Here, we think our full sun is too "full" and prefer slight shade. Keep them dry when dormant. They may be grown in pots.

Owing to their habit of flowering before foliage appears they look nicer among low plants and suggest Sedums. Each bulb usually produces several spikes. Prices—L. 40c ea., M. 30c. Small Sedum Clump, 15c.

**Hyacinths.** For obvious reasons, it is impossible for most dealers to offer Dutch Hyacinths. Supplies of Roman Hyacinths are much below last year's stocks. Other Hyacinth relatives may be substituted. We advise Scillas, Lachenalias, Muscari and Veltheimias. The closest in resemblance to the Roman Hyacinth is Scilla hispanica, and America's supply of these is dwindling rapidly.

**Roman Hyacinths.** Their culture is easier than that of Dutch Hyacinths. They are very fragrant and send up several spikes from each bulb. Plant 3" deep in south, a little deeper in north with a mulch for winter protection in far north. Rich sandy loam is best soil and part shade preferred. Their bed should not receive too much water when they are dormant but they need abundant water when growing.

**Blue Roman Hyacinths**, 15c ea. \$1.50 doz.

**White Roman Hyacinths**, 25c ea. \$2.25 doz.

**Pink Roman Hyacinths**, 50c ea. \$4.00 doz.

**Dutch Hyacinths.** We can grow these but did not attempt it when we could depend on Holland as a source. Now we have only about 50 of a good blooming size, ranging from 1" to nearly 2" diam. You will need to want them very much to pay the price we are willing to sell for. We have several named varieties and some are mixed. If you order, we will try to supply the color

nearest what you want. But do not order unless you are willing to accept a substitute color, because if you do order a blue we may have to send a pink or white. Price, largest size on hand, \$1.00 ea. Smaller sizes, 1" or more, 75c ea.

**Muscari. Grape Hyacinths.** var. **Heavenly Blue** or **Assorted Blue varieties.** Racemes of closely placed, exquisite, tiny blue bells. Fine in pots or garden. Largest size, 10c ea., 90c doz. Large, 7c ea., 60c doz.

**Scillas** are closely related to Hyacinths. *Scilla hispanica* and *S. nonscripta* look so much like Roman Hyacinths that they are often confused with them. All are useful in the garden or in pots and for cutting. All are hardy in the north except *S. peruviana*.

**Scilla hispanica (campanulata).** Blue. This species requires half shade. 8c ea. 75c per doz.

**S. hispanica.,** var. "Sky Blue." Lighter color, large and later. 12c ea. \$1.00 doz.

**S. hispanica,** var. **Arnold Prinson.** The largest blue and longest spikes. Late. 15c ea. \$1.25 doz.

**S. hispanica alba.** White flowers. 8c ea. 75c doz.

**S. hispanica,** var. **Alba Maxima.** Tallest and largest white. 15c ea. \$1.25 doz.

**S. hispanica rosea.** Pink flowers. 12c ea. \$1.15 doz.

**S. hispanica.** Assorted colors, many choice. Assorted sizes. Some are small but all should bloom. 10c ea. 85c doz.

**S. nonscripta rosea.** The species is very much like *hispanica*. Rosy pink. Half shade. 15c ea. \$1.25 doz.

**S. hyacinthoides.** One of the finest bulbs for the outside garden as it is perfectly winter hardy in north. It has a densely flowered raceme often 3 ft. or more in height. Plant in full sun. If early planted, in the south it will flower in late winter to spring. In the north about mid-summer. Flowers are very useful for cutting. The bulb is extremely hardy and a strong grower and will even recover when left out of the ground a year. Take my advice, plant it. Top size, 25c; M., 15c. \$2.35 and \$1.50 doz.

**S. peruviana.** The short scape is terminated by a many-flowered, broad and compact raceme. This is the only *Scilla* that is not hardy in the north but there it is a most useful and easily grown pot bulb. Grow it in a very cool room. It needs full sun exposure. Assorted blue tones, 35c. Assorted whites, white to cream and sometimes with very light lilac to lavender markings, 35c. General mixture, 30c ea. \$2.50 doz.

**Camassia leichtlinii.** Lavender blue to aconite blue. Hardy north or south. Close relative of *Scilla*, with flowers in a spreading raceme on a tall stem. Plant 4" deep, 4" apart in full sun or slight shade. 25c ea. \$2.15 per doz.

**Ornithogalum**s are closely related to Hyacinths and *Scillas*. Horticulturally there are two groups, tender and hardy. The tender ones are nice subjects for pot culture in the north, and for the garden in mild southern climates. They may be stored over winter in the north and planted outside very early.

**Ornithogalum arabicum.** The showiest species. The round black ovary in the center of the white flower is a beautiful contrast. Flowers in a compact raceme at top of stem giving the appearance of an umbel. Tender. Easy in pots. Super jumbo bulbs 25c. L. 20c; M. 15c; S. 10c.

**O. caudatum.** A familiar pot plant in the north which is commonly but erroneously called "Sea Onion." The foliage and flowers are pretty but not outstanding. L. 50c; Jumbo, 75c.

**O. nutans.** Lovely flowers of a most unusual color, appearing to be silver and white as a result of the green on back of the petals showing thru the white upper side. Margined white. Hardy. 15c. \$1.25 per doz.

**O. thrysoides.** 15" stems topped by a dense, white flowered raceme, 3" wide. Flowers when cut will last six weeks and are shipped from South Africa to the London market. Tender. Easy in pots. 10c ea. 75c doz.

## Lachenalias

**Lachenalias**, or **Cape Cowslips**, furnish bright colorful flowers from before Christmas to February and later. They are small plants, usually one or two

leaves. Flower scape 6" to 12" tall, with 12 to 24 tubular flowers about 1" long. For early flowers start them early in September and in no case delay beyond late October to plant. Leaves and stems are sometimes gaily spotted and decorative. **Culture.** Easy outside in mild climates and force easily in pots in the house. Plant in full sun, 2" deep and 2" apart. Several can be planted in a pot at about 2½" apart. They may be grown outside or in flats and potted when in full bloom. When tops die, dig bulbs and store dry. They rot easily in the ground if moisture is received when dormant.

**Lachenalia Ada Bryson.** Flowers orange yellow, buds and ends of spikes reddish. Blooms late December. Leaves spotted reddish. Bright and attractive. 20c ea. \$2.00 per doz.

**L. F. W. Burbridge.** Flowers most pleasing. An unusual combination of red, yellow and chartreuse green tipped with maroon. Maroon spots on leaves and stem. Blooms for Christmas. 20c ea. \$2.00 per doz.

**L. Rector of Cawston.** Flowers scarlet, citron and green. Free blooming. Leaves spotted red. 15c ea. \$1.50 per doz. \$12.00 per 100.

## Veltheimia

**Veltheimia viridifolia.** Neither a picture nor words can accurately portray the beauty of this plant. For foliage alone it is superior. The vivid green leaves are wavy margined and form a nice rosette. In pots, or in the garden in So. Calif. and other mild climates, it is in bloom by Dec. 15 and continues for about three months as large bulbs send up two or more spikes. The tubular, drooping flowers are densely placed on a long raceme. The color is a deep rosy or purplish pink of ineffable tones not found in any other flowers.

**Culture** is very easy. It prefers a sandy soil to which peat or leaf mould has been added. In pots the drainage should be perfect. They must be ordered early as nothing holds them back. Best to order before Sept. 15 or Oct. 1.

**Specially priced.** 50c ea. \$6.00 per doz. Extra large bulbs—75c, \$1.00 and \$1.50 ea.

## OXALIS FAMILY. Oxalidaceae

There are two types, the winter and the summer growing. The summer growing species are listed in our spring catalogs. The following are all winter growers. These are the brightest and most vivid of winter flowers for a sunny window or in the garden in the south. They give a profusion of bloom over several months' period. A bed looks like a carpet of solid pink, rose, white, yellow, etc. The flowers are large, some over 1" diam.

**Culture.** Plant about 2" deep, 3" apart. Large bulbs may be farther apart and a little deeper. In pots, the smaller may go 3 to 6 in a 4" or 5" pot. Use good rich soil, although they will grow in any soil. Give full sun exposure as they open only in full sun and close at night. Order and plant early as they begin to sprout even in August. But they may be shipped even with long sprouts up to mid-October.

**Oxalis Bowici.** A large plant with bright rose red flowers. 3 bulbs to a 5" pot. 5c ea. 50c doz. \$3.75 per 100. Largest size 10c ea.

**O. cernua. Bermuda Buttercup.** Deep golden yellow flowers. Very profuse. 3 for 10c. 35c doz. \$2.50 per 100. Largest size 10c ea.

**O. Grand Duchess.** Low growing plants, but give a profusion of large flowers in three colors. The **Pink** and the **Lavender** varieties are 5c ea. 45c doz. \$3.00 per 100. **White**—7c ea. 60c doz. \$4.75 per 100.

**O. hirta.** One of the finest winter Oxalis, and most unusual as it makes a leafy stem that to some extent falls over and will trail down the sides of a pot. Nice for hanging baskets. The flowers are large and deep rosy red. Super jumbo bulbs, diam. 1" and up, the best blooming size for pots, 25c ea., \$2.25 doz., \$15.00 per 100; L. 15c ea., \$1.25 doz., \$10.00 per 100; M. 10c ea., 85c doz., \$5.00 per 100; S. 5c ea., 40c per doz., \$3.00 per 100. Smaller sizes are likely to flower under ideal conditions but otherwise not too sure.

**Oxalis Special.** The bulbs offered in this lot are assorted in size but some are small. They will all flower well. Some are accidentally mixed, others are surplus. Price 30 for \$1.00.

## THE ORCHID FAMILY. *Orchidaceae*

Orchids are the most exquisite of flowers, but most of them require a greenhouse. The *Bletilla* is a terrestrial orchid of great beauty and easy to grow in the outside garden. Hardy everywhere, north or south. **Culture** easy. Plant in half shade, 3" deep in a good loamy soil to which plenty of leaf mould is added. Give plenty of water in summer.

***Bletilla hyacintha.*** Eight or more dainty orchids, 1" wide, on a 12" stem. True orchid color. Top size, 50c. M. 35c. Blooming sizes, \$25.00 per 100.

***B. hyacintha alba.*** Pure white form. 75c ea.

***Epidendrum o'brieanum.*** This orchid has a large terminal cluster of brilliant red flowers, each in the typical orchid form. The flowers open 10 or more at once and are about 1 1/4" wide. The plant makes a large cluster of tall stems, 3 ft. or more. In nature they grow among grasses or weeds which support them. We can imitate that by growing among erect plants.

They need hot, full sun exposure; an abundance of water in summer. They grow easily in the garden in the south where minimum temperatures are not below 27°.

They like a deep mulch of leaves, small branches, etc. This helps to support the stems, protects the roots when too cold, (ours easily recovered from a low of 20°) and maintains the needed constant moisture of soil.

We use soil of rich sandy loam and for a distance of nearly one foot, we add 50% peat (in volume) to the soil.

They grow easily in pots or baskets. Use 50% or more peat or leaf mould.

**Prices.** Branch with roots attached 75c. Large clumps, up in proportion to size.

## THE CALLA LILY FAMILY. *Araceae*

This family contains the so-called Calla Lilies or *Zantedeschia*, Black Callas and other Aroids.

**Culture.** All *Zantedeschias* and *Arum palaestinum* are suitable for pot culture. *A. palaestinum* will start about September or later. Do not put this bulb into moist soil before that or it will rot. *Zantedeschias*—pink, yellow, spotted leaf and *melanoleuca* may be potted by about December 15. Don't rush them as too much water before they start to grow may rot them. They may be held back and started in early spring, here in late February. All do well in the garden in a moist, semi-shaded cool place. They are not hardy in cold climates; dig in fall. The White Calla usually blooms in California in the garden in late winter. They may be planted in early fall in pots or garden.

It is an error to keep White Callas growing continuously. If rested through summer you will be rewarded with flowers. A rest brings flowers when they start again, often twice or more in a year. The Baby Calla should not be allowed to lose its foliage. Callas as pot plants need some sun.

***Zantedeschia aethiopica*, var. *Baby Calla.*** This is the smallest and whitest calla. Small enough for corsage. 20c, 3 for 50c. \$1.50 per doz.

***Z. aethiopica*, var. *Godfrey Calla.*** The best and most popular of dwarf Callas before "Baby" was introduced. Being twice as large as "Baby" makes it a "medium" size. This is so much more appropriate in size, freer in blooming and more desirable in every way that we do not recommend the large type. 20c.

***Z. aethiopica*, unknown European variety.** This variety is about the size of the ordinary large white calla, possibly not quite so tall. The flowers are exceedingly white and more wide open, larger and distinctly different in form. The plant is more inclined to remain evergreen and to flower in summer and more free blooming in all seasons. \$1.00 ea.

***Z. albo-maculata.* Spotted leaf-calla.** The prettiest foliage of all and worth growing for that alone. Endures sun best. Flowers, creamy white with dark throat. Large 15c, 20 and 25c.

***Z. elliotiana.*** Pure golden yellow flowers. Requires more shade than others. 15c to 25c. All blooming size.

***Z. melanoleuca.* Black Throated Calla.** New and rare calla. Plant larger than Yellow Calla and spotted foliage even more decorative. The flower spathe

is large, yellow and widely flaring. Margins and tip recurve and reveal an ample black-purple throat blotch. Stock scarce, order early. M. \$1.00. L. \$1.50.

**Z. rehmannii.** Pink Calla. Color varies from rose pink to deep rosy red and purple. A number will show a great variety of shades as they fade into new ones. S. 25c. M. 50c. L. 75c. Jumbo \$1.00.

**Amorphophallus rivieri.** 3' tall with rich tropical foliage. Flowers 3' long, rich chocolate, dotted red. Bad odor at first. Only immense bulbs bloom. Plant in at least half shade, 4" deep. In the north grow in pots or dig and store in late fall. Not sure to bloom first year. Smaller sizes for 25c and 50c. M. \$1.00 to \$1.25. Our largest blooming sizes \$2.00 and \$2.50.

**Arum palaestinum.** Black Calla or Solomon's Lily. Foliage and flower like callas. Really black. Plant 4" deep and not before September 1. If not kept perfectly dry until that time the bulbs rot. Flowers in February in pots or in the garden in the south. No bad odor. Best in half shade. Small blooming size 35c. Doz. \$3.25. Large, 50c. Doz. \$5.00. Jumbo 75c. Doz. \$7.50.

**A. italicum.** Ivory flower. Foliage veined white, ornamental. Hardy in north. 25c and 40c ea. \$1.50 and \$2.50 doz.

**A. maculatum.** Very much like *A. italicum* but has plain green leaves. Rare, \$1.00.

**Dracunculus vulgaris.** Gorgeous tropical foliage with large black-purple flowers with bad odor when first opened. Hardy in north if planted 8" to 12" deep and mulched. 35c and 65c ea. \$3.00 and \$6.00 per doz.

**Sauromatum venosum.** Odd tropical foliage, and the most unusual flower, with a spathe 16" long, 1" wide, yellow with purple-black spots. Spathe lies on the ground, hence the common name, Lizard Lily. Dry bulbs will bloom out of ground. Disagreeable odor. Need shade, plenty water. Large plants suggest tropical jungle. Hardy. S. 25c. L. \$1.00 to \$1.50 ea.

## RANUNCULUS AND ANEMONES. Ranunculaceae

These have recently become among our most popular flowers. Their vivid colors, cheapness and the easy culture well fit them for a top rank in amateur gardens.

**Ranunculus** range in color from red, pink, white to yellow. There is no blue. If well grown and from a good strain the flowers are very double, in a variety of shapes.

**Anemones** are red, pink, white and blue in a variety of tones, but no yellow. They should be grown with *Ranunculus* to make a complete color range. There are two types. The **De Caen** have huge poppy-like single flowers. These are our favorites. The **St. Brigid** have double flowers and many prefer them.

**Culture** of Anemones and *Ranunculus* is very easy if one conforms to their requirements. The soil should be rich. Sandy loam is better than heavy soil. Heavy soils may be made suitable with humus. The plants need constant moisture, and drying out or baking of the soil only once will result in less perfect flowers, and may be fatal. The beds should be well drained and never soggy.

**Plant** 1" or 2" deep and 4" to 6" apart, depending on size. Do not soak the bulbs. When weather is dry and warm a slight cover of brush helps and also keeps birds away. A shade of cloth or lath is good. They like cool conditions and the greatest threat is a heat wave shortly after planting. Heat and moisture combined rot the bulbs. It is best to delay planting until weather is cool, but if hot weather follows, put up shade. One can gain a couple of weeks on the chances of hot weather by sprouting the bulbs before planting. Fold the bulbs in a wet burlap sack and lay in the cool shade of a tree. Plant before sprouts are over 1".

A very good comparison for the culture requirements of these bulbs is that of Sweet Peas. You would not plant sweet pea seed in July or August, nor in September if it were hot or likely to be. Nor does the wise gardener soak his sweet pea seed. Sweet peas need cool weather, very rich deep soil, but no raw manure. The seed bed must be kept slightly moist, but well drained. The soil must never bake or have a crust formed. You must protect the young plants from birds, cut worms, snails, etc.



Just substitute "Ranunculus and Anemones" for "Sweet Peas" and you have their culture requirements.

In cool climates like that around San Francisco bay the bulbs may be planted almost any time of year. In the north they may be planted as early in the spring as the ground may be worked. They are not hurt by temperatures considerably under 32°. We have had them keep on blooming and growing when our night temperatures reach 20°.

A north Texas customer tells us that she planted 100 of our Ranunculus in the fall. They came up but the temperature later dropped unexpectedly to a little below zero. About 6 plants survived and bloomed beautifully in early spring. Probably if the temperature had been no lower than 10° F all would have survived.

**Important.** Few gardeners know that Ranunculus and Anemones are better when held out of the ground a year than the recently dug crop. It seems that the processes performed by the enzymes in such dry, hard bulbs is not completed as rapidly as in a semi-moist bulb like a Gladiolus or Amaryllis.

One source of failure with these may be that the grower of the bulbs was not able to ripen his crop early. Hot weather sometimes ruins his early planted seed beds and he may have replanted as late as December. Thus his crop was not ready to dig until perhaps August. An unsuspecting customer thinks he will plant very early in September or October. Result, poor germination, poor plants, slow growth. By late November the bulbs would have done well.

To eliminate this source of trouble, we have our bulbs grown in a cool coastal region where early planting and hence early maturing are possible.

But we are adopting a still more effective safeguard. We are offering this fall, for early orders, one year old Ranunculus and Anemones in sizes No. 2, 3 and 4. These bulbs will start earlier, grow more rapidly and bloom earlier than the 1942 crop. In order to obtain these order early. They are not only much better for early planting but preferable through the season.

One year old bulbs will appear slightly smaller because there is continuous but slight shrinkage during the dormant period of all bulbs.

The size usually planted in the garden is No. 3. This size produces flowers as good, as large and with as long stems as larger bulbs and are much more economical. Larger sizes produce more flowers per bulb but at a greater cost in proportion. Large sizes are better for forcing indoors. We offer No. 4 bulbs in Ranunculus only. They do very well if planted in flats to start and then transplanted. Under ideal conditions results with them may equal those with No. 3. But they are more exacting and must be grown just right.

**For Potting. Ranunculus and Anemones** do well and bloom beautifully in pots in a sunny window or a greenhouse. They require a very cool room and most living rooms are too hot, just as they are usually too hot for Freesias, Lachenalias, Veltheimias and almost everything else except an Amaryllis. For potting, No. 1 bulbs are preferred although No. 2 size do about as well. Even No. 3 bulbs will grow and flower satisfactorily in a pot but flower at a little later date.

**Prices of Ranunculus and De Caen Anemones. Assorted Colors.**

No. 4—10c per doz. 50c per 100. \$2.25 per 500. \$4.00 per 1000.

No. 3—15c per doz. \$1.00 per 100. \$4.00 per 500. \$7.50 per 1000.

(This is the size to order for planting outside).

No. 2—30c per doz. \$2.00 per 100. \$8.00 per 500. \$15.40 per 1000.

No. 1—50c per doz. \$3.25 per 100. \$13.00 per 500. \$25.25 per 1000.

Jumbo—75c per doz. \$5.00 per 100. \$20.00 per 500. \$39.00 per 1000.

**Straight Colors.** We can furnish **Ranunculus** in Red, Yellow, Orange, White and Pink. **Anemones** in **His Excellency**, single red, **Blue Poppy**, single blue, white, and **St. Brigid**, double, mixed colors. All are No. 3 size only, the really important size. Prices: 25c doz. 50 for \$1.00. \$1.75 per 100 500 for \$6.50. 1000 for \$12.00.

**Note.** In order to produce straight colors, the grower must rogue his crop very closely. I have seen fields in which three-fourths of the bulbs had been pulled up because they were off color. For this reason they cost more and the growers grade them slightly smaller than mixtures.

## THE PINEAPPLE FAMILY. Bromeliaceae

The **Bromeliads** are not bulbs, but that is all I can say against them. They have a rich tropical beauty in foliage and flower. Tender, but easily grown in pots in the north. They need shade with occasional flecks of sun but not deep, cool shade as they like warmth and light. With a little "too" much sun the leaves color gorgeously, but be careful of too "too" much as they burn badly then.

Give an abundance of water when growing, with their cups filled and but little in winter when at rest.

Their preferred soil is almost pure leaf mould. They will grow easily in sandy garden soil. We use half peat and half rich sandy loam.

**Billbergia amoena.** A dwarf, but one of the showiest. Flowers thru spring, summer to early fall on well established plants. Bronze and green foliage, green flowers tipped dark blue and large floral bracts of brilliant orange. \$1.50.

**B. calophylla.** Attractive large green leaves, with transverse bars of grey on outside. Blood red flower bracts and dark blue flowers. Freeblooming thru warm weather. \$1.50 and \$2.00.

**B. Distachia hybrid.** Foliage reddish green with cream spots. Long spikes with rose pink bracts and blue margined green flowers. Blooms in early spring and a few in late summer. 75c and \$1.00.

**B. Euphemia.** Grey green foliage, lightly barred on back. Royal purple flowers with pale pink bracts. It increases by underground stolons that may appear several inches from mother plant. If grown in a wire hanging basket in sphagnum moss (kept moist) these young plants will show at all angles around the basket, making a lovely and unusual plant. \$1.00 and \$1.50.

**B. macrocalyx.** Bright green leaves lightly barred with grey on back. Erect flower spike with French-blue flowers and pink bracts. \$2.00.

**B. nutans.** The most common in southern gardens. Slender green foliage, pink bracts and green flowers edged purple. The inflorescence is long and drooping, and most beautiful. Naturalized on the trunk of a palm tree, they are a most charming sight when in bloom in early spring. 50c.

**B. rubro-cyanea.** The foliage has very rich variable markings of green, red and white. Flowers green, edged dark blue with crimson bracts. Always interesting and lovely. \$1.00 to \$1.50.

**B. speciosa.** Light green leaves with greyish bloom on back. Gorgeous inflorescence of green flowers with pink bracts. \$1.75.

**B. thrysiiflora.** Abundant and gracefully recurved bright green leaves. Startling inflorescence of scarlet bracts and purplish flowers. \$2.00.

**B. zebrina.** The Pineapple Lily of Hawaii. Beautifully barred and spotted leaves. When about 2 ft. tall it sends out an enormous pendant flower spike of cerise pink bracts and chartreuse green flowers. \$1.50 to \$2.50.

### Miscellaneous

New Violet, **Royal Robe.** The newest, and the last word in violets. Large lustrous flowers of deepest violet-blue on long stems. Intensely fragrant wide open flowers. One cannot overstate the transcendent beauty or the value of this variety for cutting. You can grow these outside like any other violets or in pots in the house. They will be best suited in a temperature of about 50° F. They do not like heat, and do not bloom if much warmer. They grow well in any good garden soil, like plenty of moisture but should not be overwatered. Price 60c ea. or 3 for \$1.50.

**Tecolote Bill's Fancy Corn.** This corn grows and looks like any corn but when you husk it you find it most gaudily colored. There are white ears, black, blue or red ones (sometimes) but most of them will consist of several colors including the above as well as pink and many grains are striped or multi-colored. We cannot promise exact colors as like Tecolote Bill you never know what he is going to do. But they will be interesting and attractive decorations for around Thanksgiving to Christmas unless Thanksgiving should come in September. Price per ear, well packed, 50c, postpaid. Per dozen in a variety of colors f.o.b. La Verne, \$3.00. Seed 25c for a liberal packet.