

SB
405
.R96



A COMPREHENSIVE GUIDE

— TO —

Floriculture,

— AND —

Monthly Calendar

OF OPERATIONS.

—
BY

Columbine.





Class SB405

Book .R96

Copyright N^o _____

COPYRIGHT DEPOSIT.



32252

114

A COMPREHENSIVE GUIDE

TO

Floriculture

AND

Calendar of Monthly Operations.

13
8794

*By Columbine
Edward J. Root*

A Book of Practical Information and Guide to
the care and cultivation of flowers.

PRESS OF D. MASON & CO.,
405 South Clinton Street, Syracuse, N. Y.
1892

PROPERTY OF UNIVERSITY OF CALIFORNIA
COPYRIGHT
JUL 13 1892
WASHINGTON
20601 X
u



“IN the culture of flowers there cannot, by their very nature, be anything solitary or exclusive. The wind that blows over the cottage porch sweeps over the grounds of the nobleman; and as the rain descends over the just and the unjust, so it communicates to all gardeners, both rich and poor, an interchange of pleasure and enjoyment, and the gardener and the rich man, in developing or enhancing a fruitful flavor or a delightful scent is in some sort the gardener of everybody else.”—*Charles Dickens.*



SB405
R 96

Handwritten note: Nov-16-11.

INTRODUCTION.

"In all places, and in all seasons.
Flowers expand their light and soul like wings,
Teaching us, by most persuasive reasons,
How akin they are to human things."—*Long fellow.*

Everybody worthy of a home should strive to make it pleasant and cheerful if true happiness would prevail. Nothing will aid in this direction so easily, cheaply and effectually as flowers. They are a constant, and yet ever changing source of delight, every day presenting new leaves, new buds and blossoms and new forms of loveliness to look upon and admire. They are fairer than anything else on earth, so bright, so sweet, so full of grace and beauty, so linked by association with humanity, and though frail as beautiful, we value them, though perishable things, more than gems. Some of the greatest charms, and indeed most of the ennobling influences of gardening, consist in the constant contact and close communion with nature. The care of plants—whether it be the stately Palm and marvelous Orchid in a luxurious conservatory, or the common (but good old-fashioned) Morning Glory and Scarlet Runner trained to the walls of a lowly thatched cottage—lead us, with every step, to the study of nature, its laws and conditions as day by day growth and development are going on. Such study is full of fascination, quickening the perceptive organs, brightening our hopes, teaching patience and perseverance, and developing the most tender, as well as the most noble sentiments of the human heart.

Those who succeed best with flowers are generally found making a study of their habits, noting with care what suits them best; for it is only by intelligent observation that we become familiar with the needs of our plants, and once their nature and requirements are understood, it is a comparatively easy matter to grow them successfully.

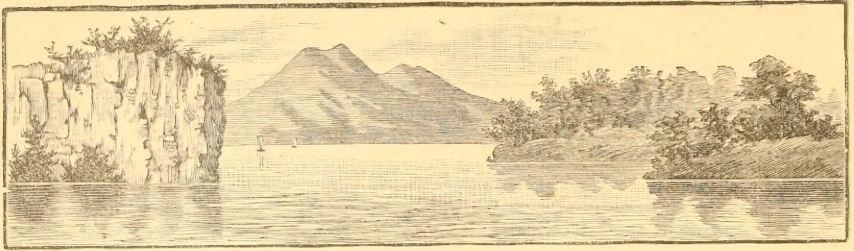
The object of this little volume is to supply in a concise, comprehensive and practical manner, sufficient knowledge of the requirements of plants to enable any one to cultivate them with pleasure and satisfaction. Appended is a monthly calendar of operations, which cannot fail to be very useful and assist to a large measure of success in the growing of flowers, for it shows at a glance what work is required during each month, with clear, brief directions for their management.

Believing that it would be of much value, I have inserted a list of seeds with time required for their germination, which is taken in part from Park's Floral Guide, but having tested them carefully myself, I have made several corrections, and the list here given may be implicitly relied upon. Should the perusal of this little volume, and its daily use as a convenient reference only half realize my wishes and intentions, I shall feel that I have not labored in vain, and that I have assisted to some degree in furthering the progress of a highly refining and health-giving recreation, and one of the most enjoyable employments that any one can follow.

Syracuse, N. Y.

E. RUSTON, (Columbine.)

Handwritten notes: "during?" and a signature.



Some Practical Hints Upon Floriculture.

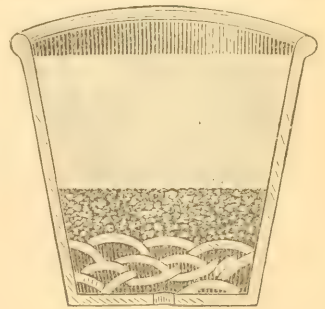
Plants on Arrival by mail or express, will be greatly benefited if the roots are laid in lukewarm water for an hour or two before planting. This will restore them to their usual vigor and freshness, after which separate each plant, and pot, if for indoor culture, or set out in the garden if the season will admit. Water thoroughly, and shade for a few days.

Pots, or Boxes, if they are not new, should be thoroughly washed, or cleaned by rubbing off the hard dry soil, which generally adheres to their sides, by means of a flat stick, so that the evaporation of moisture will take place freely through the pores. This is of more benefit to the health of plants than is generally realized by the majority of amateur cultivators.

Soil suitable for nearly all pot plants, is one combining freshness, richness and friableness. This can be secured by turning over the sods of old pastures, and paring off that layer of soil containing innumerable fine, fibrous roots which is found just below the green sward. Then go to the woods, and about the roots of trees and old stumps, or in the hollows where leaves have drifted, you will find beneath the top crust or layer of decayed leaves, a mass of light, spongy soil, called leaf-mould, that also contains fibrous roots, and is very rich in vegetable matter. This leaf-mould and the turfy soil are put together in about equal proportions with a third part composed of ordinary garden soil or loam and sharp sand, and all well mixed. This makes a compost that will answer admirably for most plants, and it may be easily varied to suit the requirements of such plants as roses, fuchsias and callas. The former like a stiffer soil than most kinds, and an increase in the proportion of loam will produce this. The fuchsia thrives best in leaf-mold, and nothing seems to suit it quite as well as earth from the woods, while the calla, being a sort of semi-aquatic plant, would be greatly benefited by the addition of a little black muck from some swamp, in place of the loam. By such slight changes, the conditions of soil for these plants can be made as near like those under which they grow in their native haunts as possible. It is unnecessary, however, to go to the trouble of making a special soil for every plant, as might be inferred from some articles that have been written upon this subject, and the simple compost, made as above, is one in which almost any plant will grow vigorously. It is a good

plan to get the leaf-mould and turf in the early summer months and put them in a pile in alternate layers, adding a little rotten manure between each layer. The action of the weather will put the compost in good condition by the time it is needed in the fall. Leaves and grass from the lawn may be put into a heap, alternating the same in layers, with sods, leaf-mould, loam and manure, and by spring another fine lot of potting soil will be ready.

Drainage is a matter of the highest importance in successful floriculture, and without it, sooner or later the soil will become heavy and sour, causing the plants to sicken and often die. Some people do not seem to understand the necessity of drainage, and often wonder why the skilled florist places a layer of small stones, moss or peat fibre (as the case may be) in the bottom of the flower pots. They seem to think that it is only a whim, and assume that if a plant is placed in a pot with an abundance of water and a high temperature, all the requirements of nature have been complied with, but alas, the very means which are taken to secure their object, lead only to disappointment. It should be remembered that potted plants are very differently situated from those grown in the garden. Of course a potted plant is restricted in the quality and quantity of nutrition to that contained in the pot, unless especially administered as a soluble fertilizer, and it is obliged to accept whatever is put there, while the roots of a plant in the garden can wander about in the soil at will, so to speak, picking and choosing what they like best, and rejecting obnoxious matter. If potted plants are provided with good drainage, there will then be a means for carrying off at least a portion of whatever is applied that may be uncongenial, but without it the small hole in the bottom of the pot will become clogged, and the surplus water will not be able to run off as it should; this will cause the soil to sour sooner or later, the roots to gradually decay, and the plants finally perish. The accompanying illustration will give a good idea of a properly drained plant pot. A layer of broken crockery, oyster shells, or something similar form the drainage material shown at the bottom. Let this be at least a half inch deep and in large pots, an inch or more is better. Over this place a thin layer of moss, dried grass, or something similar, to prevent the soil from washing down and stopping up the cracks and it is ready to receive the soil and plant. With small pots the drainage is not of so much importance, as there will be such a steady evaporation all over the surface, and with a hole in the bottom, not a great deal of water can be retained. To be on the safe side, however, it is well to use a small wad of moss or something of a similar nature. This will give perfect drainage, and with such only can satisfaction in growing fine, healthy plants be expected.



Drainage.

Potting.—This may seem so simple an operation as to require no remarks upon the subject, but when we look about us, it is quite evident that the apparent simplicity of potting has been a source of much trouble and loss to many persons who grow flowers without their knowledge of the real cause, and it is a well known fact that many failures in plant culture are directly the result of poor potting. Very often the plants are set too high in the pots, and when the required amount of soil is filled in about the roots to cover them properly, there is not enough space left between the surface of the soil and the rim of the pot to receive sufficient water to moisten the ball of earth all through, and consequently the plants suffer for lack of moisture at the roots. If you were to examine the roots of a plant so potted, immediately after watering, ten chances to one you would find them in nearly as dry a condition as they were before, because most of the water applied is wasted, as it runs over the top and down the outside of the pot. Where the roots are dry and parched, as they must inevitably be when the pots are filled too full of earth, you cannot reasonably expect the plants to do well. Plant roots must have moisture in order to produce a satisfactory development, and it should be as evenly all through the soil as possible. The proper way of potting, after the necessary drainage material has been provided, is to aim to have the base of the plant a little below the rim of the pot, spread the roots out carefully and as naturally as possible, and fill in about them with soil, jarring the pot occasionally to settle it. When completed, the surface of the soil should be about an inch below the rim, which will allow plenty of room for water. If it settles too low sufficient soil may be added to bring it to the required height. Always water thoroughly after potting, to settle the soil firmly about the roots, and keep well shaded for a few days until the plants become accustomed to the change. Growing handsome, vigorous-looking plants in small sized pots indicates much skill and knowledge of the cultivator.

Shifting.—The importance of shifting or re-potting should be carefully considered, that the plants may not become root-bound, and thus cause a severe check in their proper development, from the effects of which it generally takes a long time to recover, and even then, for some reason not fully understood, they do not seem to thrive quite as well as before. Let the shifting be done as often as the soil in the pots becomes filled with roots, being careful not to injure them. You can readily tell when a plant needs shifting by occasionally turning it out of the pot and examining the roots. If they form a network about the soil next to the pot, more room is required, but if only a few roots are seen here and there, it can remain in the same pot a few weeks longer. In turning a plant out of a pot, turn the bottom up with the fingers of the left hand covering the surface of the soil, and with the right hand holding the bottom of the pot, give the rim a gentle rap against something, and the ball of earth will slip out. Should the ball be hard or encrusted, as is frequently the case, beat around it lightly with a flat piece of wood so as to loosen the outer crust

of earth and matted roots, that water may penetrate freely, and give the roots a better chance to start out into the fresh soil.

Watering.—Water is the life and main support of a plant, and one of the most important agents of its culture, but when to apply the water is perhaps one of the most perplexing points the amateur has to contend with. Many plants have been utterly ruined through the indiscreet use of water, and some persons mechanically soak their plants daily, regardless of kind or habit, while others water several times during the day, giving only a little at a time. If the plants have been provided with good drainage (which they should invariably be), the surplus water will run off, and the mechanical method of watering may not injure them materially, especially in hot weather when moisture evaporates so rapidly, but the “little at a time and often” process, is almost certain to cause serious trouble, for, by this plan, only the top soil is moistened, leaving the lower portion and roots comparatively dry, and sooner or later the plants suffer for lack of moisture at the roots. There is but one safe method to follow in watering most plants, and that is, to wait until the surface of the soil looks dry, then water thoroughly, so that the ball of earth is moistened all through. The surplus water will run off and the plants will retain just enough for their requirements and no more. Plants in small pots will need watering oftener than those in larger ones, for there is less soil to hold the moisture and they dry out more rapidly. In winter it is a good plan to water such plants as need it in the morning, and during the summer, in the afternoon or evening, at such time that the direct rays of the sun will not touch the plants while wet. Don't be too sympathetic about watering, but watch the habits of your plants and they will make their needs known. Water only when they need it, and let it be lukewarm if possible.

Stimulation.—When a plant has recently been set in fresh soil, it will not need anything in the line of nourishing food for some time afterward, or until its general appearance indicates that most of the nutriment in the soil has been exhausted by the plant. So long as a plant thrives well, let it alone, and above all things, don't be continually giving your plants this, that and the other stimulant because so and so does, and says it will make them “hump right along.” Very likely it will, but it is only an increased action, or forced growth, with loss of flowers, and when the counteraction follows a little later, you will find the plants weak and debilitated, and practically worse off than had no stimulant been given. When a plant does not seem to be growing as well as it ought to, and frequently when flower buds are set (unless the plant be diseased), light applications of liquid fertilizer once or twice a week will greatly benefit them, acting as food, and inducing a natural healthy growth, or increasing the size as well as strengthening the color of the blossoms. Liquid fertilizer is easily prepared from well-decayed manure, by leaching in a tub or barrel. Bore five or six holes in the bottom of the barrel, then set it upon an inclined board of same width securely raised a foot or more from the ground

so that a pail can be placed under to catch the drip. Cut two grooves in the upper side of the board shaped like a V, to form a conductor. The leachings will be dark and will need diluting to about the color of weak tea before using. Should any readers not have the conveniences for preparing the above, perhaps they may be so situated as to obtain a quart of manure from some neighboring poultry yard. Put this in a muslin bag, and allow it to soak twenty-four hours in a pail of water, then remove the bag, and use the liquid, diluted in about four times its quantity of clear water, when required. Leaching manure, under the most favorable circumstances, is not very pleasant work it must be admitted, and no doubt there are people who would not undertake the job if their plants were suffering for want of a little nourishing food like this, but the real lover of flowers does not mind it much. To such, the prepared food for flowers is just the thing. It has little or no offensive odor, is reliable, effective and always ready for use. That put up by J. L. Childs, of Floral Park, N. Y., and the Boker Fertilizer Co., New York City, has given perfect satisfaction, and is particularly adapted for flowers, as it furnishes nutriment upon which the plants make a natural and healthful growth.

Syringing, or spraying the foliage every morning, will greatly benefit plants, as it prevents the air from becoming too dry, which is one of the greatest drawbacks in growing them satisfactorily in the ordinary living-room. It also keeps the leaves clean, which is another and very important point in plant culture, for their leaves are practically their lungs, or breathing apparatus, and if clogged, the plants soon sicken, just as we would if our lungs could not perform their duties. The syringing is also refreshing, and produces a soft atmosphere, as does a summer shower to vegetation. Let the water used be warm or tepid, and be sure that it reaches the under side of the leaves as well as the upper, for there is where the red spiders love to dwell, and moisture is death to them, while a warm dry atmosphere is their delight.

Training.—All who really love flowers cannot help admiring a well-formed plant, while a tall, scrawny, ill-shaped specimen, almost denuded of foliage, save perhaps a little tuft of leaves at the ends of the branches, will naturally become a source of annoyance and aggravation. A properly-trained and well-grown plant, to give the best satisfaction, should present a compact and bushy appearance. To secure this it must be brought under control at an early age, by pinching out the extreme tip of the shoot. Do this as soon as the fourth pair of leaves have grown, and it will induce new branches to start below at the axis of each leaf, which can, in turn, be pinched back when they have made a few inches growth. Pinching back, however, does not mean that huge branches should be taken off, but simply pinch, or cut out the minute leaves or center of the branch. By a little care and perseverance in this process of pinching, you can obtain all the branches necessary for a beautiful shaped plant, and at the same time secure a larger flowering surface. Of course, this will somewhat retard the period of flowering, but is it not more satisfactory to

have a good-shaped specimen with scores of blossoms, than a tall, lanky plant and only a few flowers?

Winter and Summer Flowers.—In preparing plants for either winter or summer flowering, one needs to give the matter a little forethought, and commence laying out plans early, otherwise they will be late and perhaps disappointing. It cannot reasonably be expected that such plants as have blossomed all summer, will continue to do so when brought to the window in the fall or winter, any more than those furnishing flowers during the winter should be expected to go right on blooming if set out of doors in the spring; because their vitality has already been much exhausted, and they need a season of rest. This, too, is truly in accordance with nature's law. The trees, for example, cast off their leaves in the fall and practically rest until spring, during which time their roots store up material for another season's growth. Possibly the plants may afford a few flowers, but they are usually of inferior size and quality, and the effort to mature them only exhausts their already reduced strength. If the same variety of flowers are wanted for both summer and winter blooming, then it is advisable to grow two sets, allowing one to rest during the summer and the other in winter, thereby affording ample means for each set to recuperate and store up material for another season of buds and blossoms. In resting, however, it is not really essential that all the leaves drop off, though most of them will probably do so. The aim of the treatment being, to gradually subject the plants to as nearly a state of rest as is consistent with health, in order that they may be in condition for a new and vigorous growth later, which is also one essential point in the production of flower-buds, for the flowers of most plants are produced only upon new growth.

Those plants which have grown and bloomed freely during the summer should be allowed to mature their season's growth toward fall, by gradually withholding water. They will then be ready for removal to the cellar, or any other cool place free from frost, as soon as cold weather approaches, where they may remain until spring. During the winter but little water will be required, unless the soil dries out rapidly, and then only just enough should be given to moisten it all through. It is a good plan to examine the plants regularly every two or three weeks, then if any attention be required, it can be given to such as may need it, and perhaps be the means of saving some that might otherwise perish. Bear in mind the old adage, "A stitch in time saves nine," and with a little experience you will find that a few minutes devoted to the care of plants at the right time, will save tenfold later.

Such plants as furnish blossoms during the winter may be planted out in some half shaded place, or kept in pots and plunged to the rim in a box of soil free from earth worms and other vermin. They will need very little water, if plunged as suggested, aside from that received by occasional showers, unless there should come a long dry spell, and then, just enough should be given to keep the soil from getting dust dry. About the last of July or fore part of August is a good time to encourage new growth. Repot in fresh soil, and cut back the branches at least two-thirds, then water thoroughly and shade for a few days, after which they will be benefited by the morning sunshine up to about ten o'clock, but not later, for it is too powerful. All plants may not need repotting, or forwarding at the same time, and a little common sense and good judgment should be exercised in the matter.

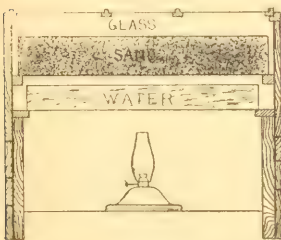
Propagation of Cuttings.

There are several methods of propagating plant cuttings, but the most simple and easily managed is that known as the "double pot" method. By this plan any one may produce as satisfactory results in propagating slips of most plants on a small scale, as the more experienced person might do with expensive apparatus and upon a large plan. To form the "double pot" you will first need a large flower pot. Cork up the hole in the bottom, and put into it sufficient sharp sand, such as builders use, to raise the top of a three inch pot to the height of the other when placed inside. Do not cork the small pot, but fill in around it with the sand to within a half inch of the top, then insert the cuttings and place the whole in a warm situation. The small pot in the center should be filled with water, which will gradually soak into the sand and keep it always moist without disturbing the cuttings. Replenish with water as often as may be necessary to keep the sand of an even moisture. When a larger propagating surface is needed, a box twelve by twenty-four inches and about five inches deep, may be used in place of the large pot; sinking two small pots in the sand about an equal distance apart, through which to supply the water. This plan of rooting cuttings is practical, yet inexpensive, and I know from personal experience that it may be successfully managed with the majority of the soft wooded plants.



Propagating by Double Pot.

No doubt there are some persons who would rather have a portable propagating case to which artificial heat can be applied at will. Such a case may be readily constructed in the following manner at a very reasonable cost, and any one who can manipulate tools, may save the expense of construction. Assuming the size of the case to be three by four feet, and two feet high, the first thing necessary is a box of this size, without top or bottom. Saw a piece out of the side (beginning at the bottom), to form a door, through which to admit air, and a lamp for heating.



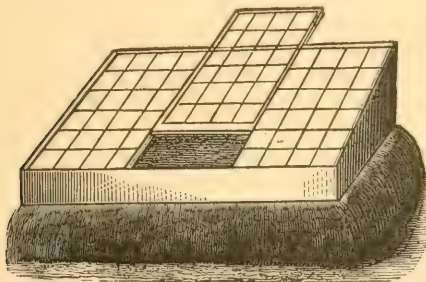
Portable Propagating Case.

A galvanized tank four inches less in length and breadth than the inside measurement of the box, and about four inches deep, should form the water tank, and that for the sand should be only a half inch less than the case. A close-fitting glazed sash should be hinged on top, and the case is about completed. A lamp properly adjusted beneath the water tank will keep the water at an even temperature, warming the sand above and giving a soft atmosphere that will be beneficial to the cuttings. Roots will

generally form in the course of two or three weeks, according to conditions, and will be indicated by the swelling of the buds and growth of leaves; then the young plants should be carefully removed and potted in good soil.

Time Required for Germination of Seeds, and Hints Upon Sowing

With fresh seeds, and under the right conditions, they may be expected to germinate very near the time stated below. It must be remembered, however, that variations in the conditions of atmosphere and soil will cause a corresponding variation in the time of germination, and if the seedlings should not appear exactly on the day expected ample time should be allowed. In planting seeds under glass, sow in one bed all germinating about the same time. The proper conditions for the successful germination of seed, are light, rich soil finely sifted, warm moist atmosphere, and even bottom heat.



Hot Bed.

The depth of planting is also very important, which, as a general rule, should be about twice the diameter of the seed, except when very fine, and these should be scattered on top of the soil and lightly pressed down with a flat piece of wood. Hard shelled seeds need soaking a day or so before planting to accelerate germination. Thus treated, the young plants appear in a few weeks, but without such treatment they often lie dormant many weeks and in some cases months. In sowing ordinary varieties that germinate readily, shallow boxes two or three inches deep, covered with a light of glass, and open seams at the bottom for drainage, will answer very nicely, but for very fine seed, like *calceolarias*, *coleus*, *begonia* and *heliotrope* that require careful attention, the saucer method has given perfect satisfaction, and as a matter of fact this method of germinating nearly all seeds under glass when only a few are wanted, will give the best satisfaction. It is composed of simply one flower-pot-saucer placed within another of larger size; the small one containing sharp sand and the other water, with a light of glass over all, as directed for the propagation of *Rex Begonias* in February calendar. A good way to supply bottom heat until germination begins, is to place it on the shelf of the kitchen range, or register. As soon as the seedlings appear they must have plenty of light and be kept near the glass, to prevent a weak, spindling growth, and if too crowded, should be transplanted as soon as they are strong enough.

SEEDS GERMINATING IN FROM THREE TO FIVE DAYS.

Agaratum,	Lavatera,	Sphenogyne,
Ammobium,	Laya Elegans,	Stevia,
Atriplex,	Leptosyne maritima,	Stock, (ten weeks)
Celosia pyramidalis,	Marigold,	Trifolium suaveolens.
Centaurea,	Mina lobata,	Viscaria,
Chrysanthemum,(annual)	Mimulus,	Virginian Stock,
Cosmea,	Salvia,	Zinnias.
Cypress Vine,	Sedum,	
Hollyhock,	Senecio,	

SEEDS GERMINATING IN FROM FIVE TO SEVEN DAYS.

Acacia,	Daisy,	Morning Glory,
Amaranthus,	Dahlia,	Nicotiana,
Aster,	Eschscholtzia,	Ononis,
Arabis alpina,	Eupatorium,	Oenothera,
Browallia,	Gillardia,	Palava,
Beta,	Geranium,	Pinks,
Bromus,	Gypsophila,	Picotee,
Brompton Stock,	Hablitzia,	Rheum,
Cannabis,	Hedysarum,	Salpiglossis,
Carnation,	Helenium,	Schizanthus,
Candytuft (perennial),	Helichrysum,	Sycosperma,
Centaurea,	Helianthus,	Sweet William,
Chelone,	Hibiscus,	Silene schafta,
Chrysanthemum indicum	Iberis gibraltarica,	Tradescantia,
Clitoria,	Linaria reticulata,	Tunica,
Coleus,	Lobelia,	Verbascum,
Cineraria,	Lychnis,	Veronica,
Coreopsis lanceolata,	Matthiola,	Vittadenia,
Crucianella,	Malvamoschata,	Wallflower,
Cuphea,	Mesembryanthemum,	Whitlavia.
Cynoglossum,	Mignonette,	

SEEDS GERMINATING IN FROM SEVEN TO TEN DAYS.

Abutilon,	Digitalis,	Phacelia,
Achimenes,	Dracocephalum,	Phlox Drummondii,
Agrostemma,	Erianthus,	Pyrethrum,
Armeria,	Exacum,	Potentilla,
Antirrhinum,	Gaura,	Poinsettia,
Begonia,	Gnaphalium,	Pentstemon,
Balsam,	Hibiscus syriacus,	Petunia,
Calceolaria,	Humulus japonicus,	Rudbeckia,
Canna,	Kaulfussia,	Rocket,
Capsicum,	Lobelia,	Thunbergia,
Catananche,	Lychnis,	Tropæolum,
Campanula (annual),	Morina,	Valeriana,
Commelina cœlestis,	Pansy.	Verbenia,
Duetzia,	Papaver,	Zea.

SEEDS GERMINATING IN FROM TEN TO TWELVE DAYS.

Achillea,	Aubrietia,	Gypsophila muralis,
Alyssum saxatile,	Bidens,	Helianthemum,
Alonsoa,	Calandrinia,	Ipomopsis,
Argemone,	Campanula,	Linaria,
Artemisia,	Calonyction,	Michauxia,
Anchuza,	Feverfew,	Platycodon,
Aquilegia,	Galtonia,	Scutellaria,
Asphodelus,	Geum,	Spirea.

SEEDS GERMINATING IN FROM TWELVE TO FIFTEEN DAYS.

Aster (perennial),	Gazaniopsis,	Peas,
Antigonon,	Hunnemannia,	Polemonium,
Anemone sylvestris,	Lantana,	Perilla,
Campanula Tenorei,	Maurandia,	Ricinus,
Callirhoe,	Mandevillea,	Ranunculus,
Chamaepeuce,	Myosotis,	Schinus,
Datura,	Nierembergia,	Torenia,
Didiscus,	Nicotiana,	Thalictrum,
Gourds and Cucumbers,	Petunia (double),	Vinca,
		Verbena venosa.

SEEDS GERMINATING IN FROM FIFTEEN TO TWENTY DAYS.

Agapanthus,	Cobœa,	Impatiens sultana,
Anemone,	Dictamnus,	Iris,
Acanthus,	Geranium sanguineum,	Liatris spicata,
Armeria maritima,	Gloxinia,	Primula sisensis,
Calla,	Hemerocallis flava,	Primula veris,
Cuphea strigulosa,	Habrothamnus,	Rivinia humilis,
Cuphea roezli,	Heliotrope,	Smilax (Boston),
		Solanum robustum.

SEEDS GERMINATING IN FROM TWENTY TO FORTY DAYS.

Adlumia,	Clematis diversifolia,	Phlormium,
Baptisia australis,	Clianthus,	Physianthus,
Berberis vulgaris,	Delphinium nudicaule,	Phlox (perennial),
Convolvulus cupanianus,	Funkia,	Rhodochiton volubile,
Campanula macrantha,	Gentiana auctaulis,	Tritoma uvaria,
Campanula fragilis,	Humea elegans,	Yucca,
Campanula nobilis,	Hibiscus speciosus,	Smilax.
Clematis integrifolia,	Musa ensete,	

SEEDS GERMINATING IN FROM FORTY DAYS TO ONE YEAR OR MORE.

Ampelopsis,	Dictamnus,	Lupinus polyphyllus,
Anthericum,	Iris,	Musa,
Clematis (in variety),	Lilies,	Tradescantia,
		Viola odorata.



Insects and Remedies.

Nearly all plants under cultivation are more or less subject to the attack of insects of some sort, and it is well to be prepared for them in advance, for if allowed to get a good foot-hold, it will require double the labor to rid them. An important point in ridding insect enemies, is the restoration of health and vigor in the plants infested. Healthy plants are seldom troubled with insect pests, but almost immediately they show signs of debility or unhealthiness, we find vermin so numerous, and with such gluttonous appetites, that it would seem as though the plants were doomed. Good insecticides, and a little patience and perseverance in applying will surely bring success.

Red Spiders.—These are more destructive than most people are aware of. They are very small, and upon close examination appear like grains of cayenne pepper. If the leaves of your plants seem troubled, carefully inspect the under side of them, for that is where the spiders generally do the most harm. They increase very fast in a dry, hot atmosphere, but moisture is sure death, and you can easily rid them by syringing the foliage, both under and upper side thoroughly every day, at an hour when the sun does not shine on them. Fuchsias and house-roses seem especially to suit their fancy.

Aphides.—The green louse, or aphid as it is called, is about the first pest amateur florists meet with, and a very destructive animal it is if not check-mated soon. The methods generally employed to rid them, is fumigation with smoke from tobacco stems, and syringing with tobacco tea, made by steeping the stems in water. Both have proven effectual in exterminating the pest, but I would give preference to syringing with the tea, because it can be easily diluted to any degree and applied to tender plants without injury, while the fumigating process is more difficult to regulate, and a little oversight, or neglect while in operation, may ruin them. Then, again, some plants are too tender to endure the fumes and would perish before enough could be given to kill the aphides. For a convenient and easily prepared remedy that can always be kept on hand, I have yet to find one that will excel Sulpho-tobacco Soap. It comes in tin cans put up in the form of a thick paste or soap, already for dissolving in water according to directions upon each package, using only such proportions as may be required for immediate applications. Florist and seed establishments usually keep it in stock, or can be supplied by the Rose Manfg. Co., New York City.

Mealy Bug.—This is one of the most patience-trying insects we have to fight against, and if once allowed to get a foot-hold it is very difficult to destroy them. They usually infest the axiles of the leaves, and may be described as a cream-colored, mealy spot of an oval shape. The best way to exterminate this pest without injuring the plants, is to brush them off with an old tooth brush, using soap suds, in which a little soot has been thoroughly dissolved; then sprinkle or syringe with clear water. A floral friend of many years' experience gave me the following remedy for this annoying pest a few years ago, and success can be obtained with it by perseverance. The mixture is composed of a tablespoonful of kerosene and a half-teacupful of sour milk beat together until the two unite, then mix with a teacupful of water and beat well together. Apply with an evaporizer or syringe. Alcohol diluted with five per cent. of water will kill the mealy bug if applied frequently for a few weeks.

Scale, or Shield louse, as it is sometimes called, may be effectually removed by scraping off the scaly-looking substance with a small knife, being careful not to cut or bruise the bark of the plant. Then with a stiff tooth-brush carefully scrub the plant, using soap-suds. If the work is thoroughly done one treatment will generally rid them, but it may be necessary to follow with a second, two or three weeks later, to exterminate a new generation.

Worms in Soil.—For these, use lime water, made by slacking a piece of lime about the size of a teacup, in a pail of water. Stir well and let it settle, then give each plant affected, a little of the clear water once or twice a week as occasion may require. Bottle for future use any that may be left over.

Thrips are very annoying insects and seem to be particularly fond of chrysanthemums. They are of a dark brown or blackish color, and gather about the branches and flower-buds with wonderful rapidity if allowed to remain unmolested for a few days. The use of tobacco tea or dust, or sulpho-tobacco soap as advised for Aphides will banish them if persistently used. Plants like chrysanthemums with a bark covering or tight skin can endure a somewhat stronger liquid than those more delicate, thereby affording an opportunity for a more hasty removal.

Mildew.—If not too bad, flour of sulphur dusted on the affected parts will usually answer. Carbolic soap well diluted in water will also destroy this parasite. Sulphide of potash has been tried for mildew on roses, chrysanthemums, and other plants of similar nature with success. A quarter of an ounce diluted in a gallon of water and thrown on the affected foliage with a fine sprayer works satisfactorily.

Earth Worms.—A piece of fine gauge wire placed in the bottom of flower pots will prevent earth worms from getting in through the drainage hole. Lime water will drive them out if the pots are placed in a slanting position.

Snails.—These pests can be readily captured by placing fresh cabbage leaves among the plants early in the evening. The snails will collect underneath, and can be gathered in the morning and destroyed.

After applying insect remedies to the foliage of plants, it is a good plan to always wash or syringe with clear, luke-warm water a few hours afterward to remove the insects and keep the plants clean and sweet.

January.

Seasons come and go without any sharply defined lines, so that except in the calendar, one hardly notices the end of one and the beginning of another; but a New Year brings with it something that arouses our activity, and stimulates the mind of even the most utilitarian nature more than any other event. In practical gardening this is the most inactive month of the year, and plants usually make but little, if any, growth, but should they afford you a few flowers it would be principally upon the strength of earlier stored up vitality. Stir the soil frequently about the plants; it allows the free admittance of air to the roots and helps to keep the soil in a healthy condition. A little later they will begin growing, and show flower buds, then light applications of fertilizer will benefit them. Remember, that in this dark, cold, open month of the year, it requires double the time to make the same growth, than in the spring, and you will not be inclined to complain that flowers come slowly. What is known as the Dutch bulbs should now be well advanced toward brightening the window during January, when so few other flowers seem inclined to bloom. The season of winter offers opportunities for making wise plans in the arrangement and improvement of the future garden. Consider them while you may, for without forethought, carefully matured plans, and sufficient preparation, permanent success is never obtained in anything.

Abutilon. The plants will make a rapid growth soon, and begin flowering. Give liquid fertilizer occasionally, and watch for aphides. Start cuttings for summer flowering, unless plenty of last year's stock are wintering in the cellar. Young plants must be pruned well in order to have them in good form.

Agaratum should have plenty of root room and water to do well. Aphides like it, so be prepared for them, as mentioned under Cinerarias.

Air. Don't forget that plants require pure oxygen as well as people. It should be admitted freely on all mild days, by opening a door or window in an adjoining room, so as not to cause a draught. Daily airing for a few minutes at a time will be very beneficial, even in cold weather, so long as the plants do not get chilled or frost bitten.

Amaryllis. Those inclined to grow may be repotted in fresh soil. Do not pot too deep; just enough soil to cover the roots with the largest part of the bulb above, suits them best. Water sparingly at first until new growth appears, then regulate as circumstances require.

Annuals, such as Agaratum, Lobelia, and Sweet Alyssum, may be used effectively later, if started now. Morning Glories have also given fair results, but the principal trouble with them, as well as most annuals under glass, is the green louse.

Azaleas will be coming into bloom now, and should be well supplied with water. By keeping them in a rather cool temperature, the flowering season may be prolonged considerably.

Beginners generally undertake too much. A single plant if well grown and cared for, will afford more pleasure than a whole house full neglected or half cared for. If you want to avoid disappointment, begin with a small quantity of the staple sorts, and study their habits and requirements well. It is time enough to add others as they can be properly attended to.

Begonias of the flowering variety should now be well advanced, and show signs of bloom. They grow best in an east window, with plenty of light, but little or no strong sunshine. The Rex varieties must have a moist atmosphere, such as that afforded by a fernery, but when this is not convenient, a bell glass placed over each plant will answer admirably. Such as were started early and have completed a period of bloom, should have the older branches trimmed out, and allowed to recuperate by gradually withholding water for a few weeks. Then, some of the old soil can be carefully loosened with a pointed stick and gently shook out by inverting the pot, at the same time holding the plant in place. Supply fresh soil, water sparingly at first, and new growth will soon appear, bringing with it another crop of flowers.

Bulbs. Late started bulbs should now be ready for removal from the cellar to the window, to continue the succession of bloom. As the flowers fade away on those started early, remove the flower stalks, and such as are desired for planting in the garden next fall should be ripened off by gradually withholding water until the leaves begin to turn yellow; then remove to the cellar, and if placed upon the ground will keep sufficiently moist for some weeks without further attention. My experience in using forced bulbs for fall planting has been very satisfactory, and it pays to use them in that way. Of course, one cannot expect as perfect or large spikes of bloom from them, as from new bulbs. Forced bulbs of Hyacinths, Tulips, Lily of the Valley, Narcissus, as well as others, are worthless for forcing again.

Bulbs or Tubers, such as the Gladiolus, Caladium, Dahlia, Tuberose, etc., in their winter storage, should be looked over occasionally to see if in good order.

Callas in their native habitation, grow in mucky, low places in a very warm climate, and though not easily injured from over watering, they will not do well in a sour mud, such as is sometimes found in undrained pots. Always use warm water, and when flower buds appear it may be given quite hot with good effect.

Camelias. Sponge or syringe often, at least twice a week. A temperature of fifty degrees is about right.

Carnations also seem to be a great attraction for red-spider and aphides; they should be guarded against as suggested for Cinerarias. Keep the plants well tied, and after blooming remove the old stalks.

Cinerarias should make a steady growth, and need shifting as often as the roots fill the pots; never allow them to become root-bound, nor suffer for lack of water. They are subject to attacks of aphides and red-spider. Keep a

look out for these pests, and use insecticides occasionally to guard against their coming, as suggested under "Insects and Remedies."

Cyclamen are generally dried off after flowering, but I think it better at this season to keep them growing slow until warm weather, and then plant in the garden beneath the shade of large plants for the summer.

Fergeries. Water moderately as required. Air occasionally, especially after watering, but not while any dust is floating about the room.

Floral Requisite Box. A handy device for holding floral requisites, is a small box about twelve inches wide and twenty inches long. The handle can be made out of a wooden barrel hoop, previously soaked in water. Tack a leather strap, in loops, around the inside of the box, about half way up the sides and ends. This will be convenient for holding the trowel, old knife, plant sprayer, pliers, pruning knife, etc., and in the bottom have a small box of tacks, nails, screws, and another with tobacco powder, ready for fighting insects. Here also can be kept tobacco-soap and many other floral requisites all in readiness, and it will save much time and trouble in looking for them when wanted.

Frosted Plants should at once be removed to a place where the temperature is just above the freezing point. Here carefully immerse each plant in a pail of cold water by placing the right hand over the top of the pot, allowing the plant to pass between the second and third fingers, and inverting the whole exactly the same as you would do in turning a plant out to examine its roots. If the temperature where you have the plants is below freezing, some lighted lamps will gradually raise it, but care should be taken not to increase the heat too much.

Fuchsas. Those which have been resting in the cellar may now be removed to the light with moderate heat. Water as growth appears, and as the roots fill the pots, remove to a size larger, first shaking off most of the old soil. Use fresh, rich soil about the same as for geraniums, but let the leaf-mould form the largest portion.

General Reminders. Plants and bulbs stored in cellars should be looked over occasionally, and all dried or decayed matter removed. Do not neglect moistening the soil of such plants as need it while wintering in the pit or cellar. They will not require much, but that little is too often forgotten. Tuberoses and Tigridias must be kept in a warm place where the temperature never falls below forty degrees. Keep them protected from mice or they will be minus in the spring. Sponge the leaves of your window plants often, to keep the dust from filling the pores. Use tepid water, with a little tobacco-soap dissolved in it. Keep all dead and decayed leaves picked from growing plants. In re-potting, if the ball of earth is hard or matted with roots, loosen it by gently rapping against something.

Hydrangeas, if wanted specially early, may be started. For general use, a month or two later will be better.

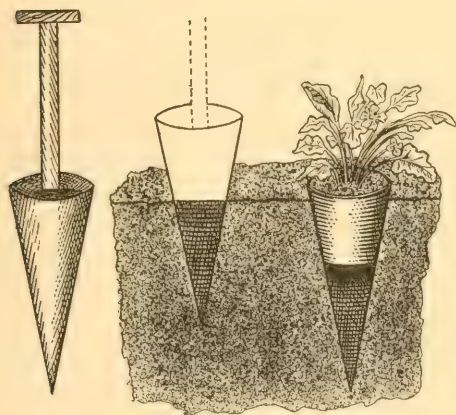
Ivies delight in having their leaves sponged, or syringed freely. Provide good supports.

Lily of the Valley. Pips may yet be potted for late blooming. See Sept.

Liquid Fertilizer is always preferable for pot plants, but it is not very convenient to obtain at this season of the year. A first rate substitute can be made by putting a shovelful of hen manure in a cloth bag, and allowing it to soak twenty-four hours in a pail of water. Then remove the bag, and use the water sparingly once or twice a week on such plants as are making a good growth, or coming into bloom. Of the prepared fertilizers, "Bowker's Food for Flowers" or "Childs' Excelsior," are reliable, effective and always ready for use.

Pelargoniums. If room can be made for them, bring from the cellar to a moderately warm place at first, cutting back well and re-potting in fresh soil.

Plunger. This is a useful tool in plunging pots during the summer, and



one that is easily made out of a block of hard wood two feet long and eight inches square. The block can be shaped by any one possessing a little patience and a sharp jack-knife, with a sheet of medium fine sand-paper to rub it down smooth, or any cabinet-maker will turn it down at a trifling cost. A straight stick of hard wood with a small piece mortised at the end, will answer for a handle, or that from an old spade if at hand, would be still better. For usefulness see May.

Primroses must be carefully watered, for too much moisture at the plant's center is ruination to them. Let the surface of the soil slope away from the plants to the edge of the pot. Do not moisten the leaves.

Protect your plants well on cold nights by covering them with papers, or otherwise. A light frame, with legs several feet from the floor, and covered with "Patent Protecting Cloth," so that all sides may hang down two or three feet, will protect them from quite severe frosts and may be "worth its weight in gold" on extremely cold nights. It can be had for eight or ten cents per yard of Henderson & Co., New York. A lighted lamp set near the plants may also render valuable assistance.

Sowing Seed. Those who have a light place in which to keep the young seedlings, may sow seeds of Petunia, Ten Week's Stocks, Pansies, etc.

Tools. Now is a good time to repair, sharpen, and put in order for another season. Aim to have "a place for everything, and everything in its place." If you have no convenience for holding small floral requisites, make a box like the one suggested above.

February.

This month is doubtless as trying as any during the year for our pets, the flowers. The coldest weather is yet to come and at a time when the plants are least capable of bearing it. Long confinement in close quarters (debilitating to all kinds of life), and no small amount of coddling have made winter-blooming plants more than ever susceptible to the cold of winter. A little later, however, they will pick up, and if the various little points necessary to their treatment are observed and attended to, they should be in good condition early next month, as the days will be longer and brighter. There is time yet before garden work actually begins, to study up and adopt some plan that should prove advantageous; and there is seed to buy, plants and locations to select, and many other small, but none the less important things that may be done better now, than when the rush of work opens up later in the season.

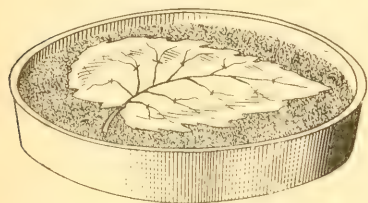
Air. Fresh air is as necessary to house plants as to human beings, but they do not like strong or sudden draughts.

Alyssum. Sweet Alyssum may now be started from seeds or slips.

Amaryllis that has been kept dry in pots, may now be brought to a warm, light place, repotted in fresh soil and watered sparingly at first, and when the flower buds begin to expand, may be watered more freely. See January remarks.

Azaleas as they complete their blooming period, should have a warmer place to induce a free growth for next season. Syringe frequently.

Begonias of the Rex varieties are propagated from leaves, a process very interesting to any one who has never experimented in this line. A good plan is to take a well-matured leaf, trim off the outer edge, cut the largest ribs



Propagating Begonia from Leaf.

just below the dividing points, then take a flower-pot saucer nearly filled with sharp sand, and press the leaf (face side up) slightly into it, weighing the leaf down at the cuts with sand or small pebbles. Place this in a larger saucer and keep in a warm situation, with hot water in the large saucer and a pane of glass to cover all. The water will soak through into

the sand and keep it moist. Should it become too wet, turn out the water, and let the saucer remain dry for a short time.

Flowering varieties which have had proper care, should now reward the owner by a grand display of bloom. Water only when the soil appears dry on the surface, and then give sufficient to thoroughly moisten it all through. If proper drainage has been allowed, all surplus water that the plant cannot retain will run off through the hole in the pot. A little weak liquid manure once or twice a week will benefit.

Begonias that have done blooming should be kept rather dry at the roots, and much of the old growth cut out. Later new shoots will start, then the old soil can be shaken out and the plants repotted in fresh soil, using same sized pots.

Bulbs forced in glasses may, after blooming, be planted in pots or boxes of good soil and allowed to ripen or dry off gradually, and used for outdoor planting, same as those grown in pots. Such as were late planted should still continue to make a good show if brought from the cellar or pit as growth appeared.

Cacti. Repot such as need it, this month or next, using moist soil of ordinary loam and sand in sufficient quantities to make it thoroughly porous. Shake off most of the old soil before repotting, and cut out all dried or dead roots close to the stem. A little thoroughly decayed manure may be put in before the soil, and a handful of clean sand right under the plant. Always use pots about the same size as the plants or just large enough to hold the roots comfortably. Clean white pebbles may be placed about the plants to steady them, and it will keep the water from splashing, besides giving a better effect. See March.

Calceolarias. Treat seedlings as you would Cinerarias.

Callas. Such as have not yet bloomed should be kept steadily growing. Give quite warm water and do not crowd. Those started early should now be in flower.

Camellias must have plenty of fresh air and moist atmosphere. Avoid all draughts and do not chill them. Sponge the leaves often.

Chinese Sacred Lily should be planted the middle of this month for bloom at Easter. They may be grown in soil or water, but the usual way is to set the bulb in a fancy glass dish among pebbles, and keep it well supplied with water. A few lumps of charcoal in the bottom of the dish will help to keep the water pure.

Chrysanthemums. Cuttings may now be taken, or a division of roots from those wintered in the cellar. Young plants should be potted in a moderately rich and substantial compost of about one part old manure, and two parts sand and decayed sods. Always provide good drainage. Keep them in a cool, shady place for a few days, or until started; then remove to light, and air freely. As the pots become filled with roots shift to one size larger. Keep the ends of the branches well pinched back from the first, if well formed and bushy plants are desired.

Cinerarias grown from seed, require about the same treatment as Gloxinias while young.

Early Flowers. If you want early summer flowers, and have plenty of room to accommodate the plants, they may be brought from the cellar or pit to the light and heat about the last of February or early in March, repotted in

fresh soil and cut back. New growth will soon start, and by the time warm weather sets in they will be well advanced.

Epiphyllum truncatum, if started early, will now be gay with bloom. Let it have all the sunshine possible, and water the same as other plants while in bloom, using quite warm water.

Fondling Plants. Some people kill their plants with kindness. They give them every kind of stimulant that they learn of without stopping to reason the matter over, and it is as effective as feeding a dyspeptic with rich, indigestible food.

Fuchsias. Those wintered in the cellar may be repotted and started for early spring blooming, if this has not yet been done. Do not let them get pot bound.

General Reminders. Gloxinia and Cyclamen seed may be sown now, and as soon as the tiny plants appear "prick off" separately into a box of finely sifted leaf-mold, where they may remain until warm enough to transplant in a cold frame. Give plenty of light and moderate warmth while indoors. See May. Do not forget to outline next season's work, if not already done. Clean all pots once used before using again.

Geraniums. Such branches as do not show signs of bloom may now be propagated for spring use, and as the old plants gradually finish blooming they may be cut back and allowed to rest.

Gloxinia bulbs may now be potted and started for early summer blooming. Water moderately until growth appears.

Grafting Dahlias. Where one has the convenience of a conservatory or greenhouse the tubers of some rare or fancy sort may be started now. A little later cuttings can be taken from the young growth and inserted in the tubers of ordinary varieties and planted. They will make good flowering plants by summer. This is a good way to start new varieties when exchanging cuttings of choice kinds.

Heliotrope. Take cuttings now for summer. Old plants may be kept along until spring, and then transplanted in the border.

Hollyhocks. To secure bloom the first year from seed, it should be planted now in shallow boxes, and kept warm and moist until the seedlings appear, then transplant, and keep growing moderately until it is warm enough to set out. Plenty of light, and moderate heat, should grow good, stocky plants by spring.

Insects. Look out for them as this is the time for their winter picnic, and they no doubt calculate having a good deal of fun in their way, but will give fun of another kind, if allowed to get a good foothold. Suggestions are offered for their extermination under "Insects and Remedies."

Lemon Verbena. These can now be brought to the window, and started in the same way as suggested for fuchsias in January.

Oleanders. If very early bloom is desired, and one has room for them, the plants may be brought from the cellar to warm and moderately light quarters. When growth begins, give more water and a little stimulant occasionally.

Pansies. By carefully lifting some plants during a thaw, or when the ground under the snow is not frozen, and bringing them to a cool window, they will flower pretty well, if kept near the glass, and provided freely with fresh air.

Pelargoniums. Keep growing steadily. Give plenty of light to prevent drawing, and do not let them suffer for lack of water.

Plants kept in garret or cellar during winter, must be occasionally looked after. Insects may feed on them, and, unless exterminated, will soon kill the plants.

Primroses. Treat as for Cinerarias.

Propagation. Most kind of plants wanted for early spring use, may be started in moist sand.

Protecting Plants. More care than usual will now be needed, especially in rooms not supplied with constant heat. On very cold nights, it is well to move them a few feet from the window and cover lightly. See January.

Pruning is needed as much in soft-wooded growths as any others, but amateurs in general seem to be afraid of using the knife on their plants. A little practice in this direction, with common-sense and judgment, will result in better shaped plants and more flowers.

Roses. Monthlies should now be well advanced toward the blooming condition. Try to keep an even temperature of about fifty degrees. Let the atmosphere be as moist as possible, and keep down the aphid, and any other troublesome pest by the use of insecticides, as directed under "Insects and Remedies." Hybrid varieties that were potted in the fall, may now be removed to moderate heat.

Sowing Seed. Those desired for early bedding, such as Stocks, Verbenias, Pinks, Cobœas, may be sown early this month, and all annuals may be sown in boxes toward the last of the month.



March.

As the days grow longer and the sun increases its power toward mother earth, there will be an awakening among the members of the Floral Kingdom, and all plants will feel such beneficial influences from the warm rays of sunlight, that no artificial heat can produce. Plants will start with new vigor and activity, promising with it more beauty and blossoms. March under ordinary circumstances, is the gayest month of the season among indoor plants, and with a little forethought and attention, many that are about to blossom may be so advanced or so retarded as to have their blooming period prolonged several weeks, if that be consistent with their nature. Plenty of air, an even, but rather low temperature and water accordingly, are important points. Some of the varieties that bloomed early in the season will now be preparing for a rest, and should be allowed to take it.

Abutilon. Take cuttings now for winter flowering plants next season, and when propagated, keep them growing steadily by giving plenty of root room or reducing the ball of earth and roots at each shift.

Agaratum is readily propagated from seed or cuttings. Some of the hybrid varieties can be obtained only from cuttings. They make fine border plants, especially the dwarf growing sorts.

Amaryllis. At this season plenty of sunshine will benefit them, and if about to blossom, an occasional application of liquid manure will help the flowers along as well as strengthen the color.

Azaleas will stand a great amount of heat, but at the same time a moist atmosphere is essential. It is very important to dampen the foliage two or three times a day; this will supply much of the required moisture.

Bulbs, such as Hyacinths and Tulips that have done blooming are useless for forcing again. They should be ripened off by giving less water, and finally removed to the cellar to rest until planting time in the fall. In the course of a season or two they will do pretty well, all things considered.

Begonias. Bulbous varieties may now be potted in light, rich soil and given a warm place with moderate watering until started; later they can be planted out in the border or veranda box. Flowering varieties which have been partially resting during the winter may be repotted in fresh soil, pruned into shape and given a light place. Rex varieties should have a change of top soil for half an inch or more, being careful not to injure the roots. Loosen the soil with a pointed stick and shake it out by turning the pot on its side. If filled with roots, shift to a size larger pot.

Cacti. From now onward the temperature cannot be too high at the north, and a free exposure to the sun is desirable at all times to produce flowers. The soil should be composed of sufficient sand and loam to render it porous. A small portion of lime may be added for the *Opuntia* and *Cereus* types. Charcoal finely crushed is good to mix with the soil in moderate quantities.

Provide good drainage ; from one-fourth to one-half, if you expect them to do well. Very little water is needed for at least three months of the year—when the plants are kept cool and resting—November to January inclusive ; but they should be examined once a week. Never allow the soil to get in a stagnant, saturated condition. When growth is rapid, plants need more water than usual, and the strong, free flowering varieties may be given a little weak liquid manure, both when growing rapidly and approaching the blooming stage.

Callas. After blooming they will continue growing, though not as vigorous as before, and should gradually be given less water until warm enough to set out doors. See May.

Cannas. If to be grown from seed it should be soaked for twenty-four hours before planting. Bulbs may be started for early stock, using rich soil.

Carnations. Cuttings may yet be taken during the early part of the month. Young plants propagated early, for next winter, should have plenty of light, and but little direct sunshine, or heat, until time to plant out in the spring.

Chrysanthemums. Give the young plants a light place while growing to produce stout growth. A moderately cool temperature is required, otherwise they will be weak and spindling.

Cyclamen. Seed may be sown now in a saucer of sand as directed for germinating seeds under "Time Required for Germination" etc. When the seedlings appear keep them near the glass until warm weather. Transplant or shift as often as required, leaving the bulb partly exposed.

Dormant Plants, such as Oleanders, Hydrangeas, Fuchsias, Cacti and other plants, may now be brought to the light and warmth, if space permits, and started growing again. Cut out the dead branches of some, and prune others to a good form after growth has started.

Fernery. Lift the cover to ventilate and give a little fresh air occasionally, especially while airing other plants. Although ferns love moisture, free drainage is of real importance.

Foliage Plants, such as Caladiums, Colocasias and Cannas, may be started in pots where one has room, and they will be well advanced by the time it is warm enough to bed them out in May. If Cannas are grown from seed, let it soak in water for a day and night before planting, to soften the hard shell.

Fuchsias. While it does not seem wise or advisable to put young plants in large pots as a general rule, yet the fuchsia seems to do much better if given a little larger pot than ordinarily used. Let the soil be composed mostly of leaf-mold. Water thoroughly after potting, and keep well shaded for a few days until the roots become accustomed to the change.

General Reminders. Keep the foliage of all plants clean. For shading under glass take naphtha or benzine, and add white lead until of the consistency of skim milk ; apply with syringe.

Geraniums. Propagated now and well cared for as directed under "Some Practical Hints," should make good blooming plants by next winter. However, my experience leads me to believe that plants are better the second year, if properly cared for. They are larger and better for pruning into good shaped plants with more flowering surface.

Gloxinias. Bulbs that have been at rest since fall, may now be started at intervals of two or three weeks for succession of bloom during the summer.

Insects are likely to be more plentiful at this season than any other, and only determined effort with the use of insecticides will keep them in check. Keep them down by all means. Airing freely will help.

Liquid Manure. Plants that have but a small area to grow upon are best treated with liquid manure, because this is the most advantageous method of supplying the fertility. It is advisable to dilute the mixture considerably and not apply too often, but at regular intervals. During winter the washings from barnyards may be obtained, and will prove efficient for this purpose.

Oxalis should now be in bloom if in the full sunshine, and will need attention as to water.

Palms from seed should be planted now.

Pansies. Now is the best time to sow pansy seed for summer and fall blooming. Plants wintered over will bloom heavily in early spring, and will not be satisfactory bloomers during the latter part of summer.

Phillocacti. The most important item is the soil. A light, turfy matter should form the basis, to which add one-third leaf-mold, old dried cow-manure and sand well mixed together, and use in a rather dry state. Good drainage is the surest means of preventing failure. When plants have attained a good size and fill the pots with roots, an annual top dressing of soil and manure will suffice without repotting and is preferable, as the plants bloom better when undisturbed. They are not so particular about exact temperature as some others, but do better in a warm place when growing or blooming.

Propagation of such plants as will be suitable for bedding out and window or veranda boxes may now go on. Cuttings of soft-wooded plants, such as Coleus, Alternantheras, Geraniums, Petunias, Ivy Geraniums, Heliotrope, Flowering Begonias, etc., are easily propagated in moist sand as explained under "Propagating Plants."

Protection. Shrubbery and plants often suffer more in the spring than during the winter, just when the sap begins to start, if not well protected. It is not the freezing that injures them, but the continual thawing and freezing as the sap is coaxed upward on bright days.

Ricinus or Castor bean, if planted now in pots with bottom heat to germinate, can be forwarded as much as desired, and will be fine plants for the center of a foliage bed by spring.

Shading—such windows as are exposed to strong sunshine, during the hottest part of the day will benefit most plants now, especially will it apply to Camellias and Primulas, that are easily injured by strong sunshine.

Soil. Those who got in a supply last fall, will now be prepared to mix a portion for use when the young cuttings are ready for potting. It is better mixed a little in advance of using.

Sowing Seed. This is a very important matter, and one in which amateurs are most likely to fail. If seeds are planted too deep, they either rot in the damp, cold soil for want of warmth necessary to germinate them, or after germinating, perish before the tender roots can reach the sun and air. Covering seeds just the right depth is of much importance in their germination. As a rule, the smaller the seed the lighter they should be covered, and very fine seed should be simply scattered on top of the soil and lightly pressed in with a flat stick. Of course there are some kinds of seeds that are robust, and will grow no matter how they are treated. With care in planting to the required depth, a mellow soil finely sifted, warmth and moisture, failure is almost impossible if the seeds are good.

Tender Plants for bedding, like Salvias, Heliotrope, and Coleus, may be started now, if convenient to handle them.

Transplanting hardy shrubs, vines, etc., should be done as early in the spring as possible. Prune all useless or superabundant limbs, and do not keep the roots unduly exposed to winds, sun or frost, as they may be injured.

Tuberose bulbs can be depended on for blooming but once, so be careful to get good, strong flowering bulbs, and order them early. Our warm season is so short that it is best to start them in the house during March and April, in pots or shallow boxes. Provide good drainage and use good, rich soil, but before planting the bulbs put a little clean sand about each one, to prevent the rich soil coming in contact and rotting them. They should then be placed in a warm situation, and watered carefully until growth begins. When the leaves have grown two or three inches, remove them to a light, sunny place during the day, being careful that the plants do not get chilled. It is always a good plan to return them to a warmer quarter at night until well advanced in growth. To have a succession, plant bulbs in this way from the 1st of March until about the middle of April. They can be kept in the pots or boxes, and bloom in them if desired, but when preferred in the open ground, they should be removed to a sunny situation about the 1st of June. Many causes of failure are due to poor soil, lack of moisture, and particularly lack of sufficient heat. Split off all the offsets with the thumb-nail, thus keeping all the strength in the bulbs for bloom. Excelsior and Diamond Pearl Strains are the best.

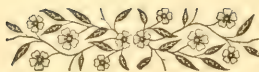
Ventilation. On bright, warm days, admit plenty of fresh air. It is just what plants need as well as human beings, but there should not be a draught,

neither should the air blow directly upon the plants. Let the opening be in an adjoining room if possible, or at a distance from the plants.

Watering needs close attention, for at this season growth is very rapid, as well as evaporation.

Wax Plants may now be started. See October.

Wild Flowers. Go forth into the woods in the early spring with a basket and a trowel in hand, and dig up some moss, fern-roots and *Hepatica triloba*, and add to them roots of wild violet and wood lily and plant them in a box, keeping them well watered. A bell glass placed over them will keep the atmosphere moist, and the leaves free from dust. When the tender ferns unroll and the flowers unfurl their hidden beauty, they will give you a glimpse of real nature.



April.

The lengthening days and brighter sun indicate the approach of spring. During this month much important work may be done in the flower garden; though perhaps only in some sections, it nevertheless pays to do all that can be done now, so that when spring weather actually unfolds itself, no time will be lost on account of any unnecessary delay in attending to the various little matters. The active, energetic flower lover will "take time by the forelock," and "improve each shining hour." One of the first essentials toward successful flower growing is a thoroughly prepared soil. Have this spaded deep and enriched with well decayed manure. If the first spading does not loosen it sufficiently, go over the bed again, for according as we now prepare shall our pleasure be when summer has put on her floral garb.

Annuals sown early, must not be crowded; transplant or thin out.

Airing. Let it be freely done now as the weather outside will permit. It will do the plants good to set them out doors on warm days, and particularly so if a warm shower is visible.

Azaleas. When the blooming season and growth is pretty well over give freely of fresh air and syringe well.

Begonia *Wiltoniensis* that has been resting during the winter may be re-potted in fresh, rich soil, and brought to the window after a few days. It will make a fine spring and summer bloomer.

Bulb Beds may now be uncovered. Should there come a frosty night they can be covered lightly again. When through flowering, the bulbs may be lifted with some soil about them, and put in boxes to ripen, in order to give space for something else. Water moderately for a while, and when ripe remove to the cellar to remain until fall.

Callas will be about completing their winter's bloom and growth, and will need to rest until fall. As soon as it is warm enough, plant them out in good, rich soil, taking them from the pots. A spot shaded during the hottest part of the day will be right.

Camellias should be more frequently syringed, or the leaves sponged, as the moisture soon evaporates.

Chrysanthemums. If new varieties from cuttings are wanted for blooming next fall, start them now in sand. For fall blooming in the window it is preferable to grow them in pots, but care should be taken so as not to let them become pot-bound. A steady, healthy growth is required for good results. Don't be afraid to keep the ends of the branches pinched in if you care for well formed plants. See that they do not suffer for want of water.

Coleus. If wanted for bedding, take cuttings now and as soon as propagated, pot in good, rich soil.

Dormant Plants such as Dahlias, Caladiums and Cannas, should now be started if not already done.

Flower Beds. The proper time for sowing seed in open ground will depend upon the condition of the season. If good weather should come early with a fair probability of remaining, the first sowing may sometimes be made soon after the middle of April, but there is nothing to be gained in sowing seeds in the open ground so long as the weather remains unsettled, and rarely can little be done in this line before May.

Fuchsias often bloom freely at this season, and need considerable water. A little stimulant at such times will benefit them. They like plenty of root-room and should not become pot-bound. To secure the best effects from the Fuchsia, it should be grown where it can be looked up at. If placed on a bracket above the level of the eye, the flowers show to the best advantage.

General Reminders. Remember to shift such plants as require it. Active plants must have fresh, sweet soil if they would show their vigor and beauty. If shrubs or bushes are to be pruned let it be done without delay. Guard against insects. Climbers for summer, like Maurandia and German Ivy will do better if cut back now. Look close to the propagating box and pot all slips that have roots. Syringe roses with tobacco water two or three times during the month as a preventative against the rose slug. In digging the flower beds, spade them over deep. Ground dug to the depth of two feet resists the drouth better than if dug only one foot.

Gladiolus. Toward the end of April the first planting may be done, continuing at intervals of two weeks up to June.

Gloxinias for summer flowering may now be started in pots or boxes.

Hanging Baskets for summer should be started now, by dividing or slipping suitable plants. If the little trouble of taking them down when in need of water, as directed in September, is carried out, a Begonia Wiltoniensis and Geranium or two would make a good display among Ivy Geraniums, Kennelworth, and common Ivies.

Hardening Off is of much importance to plants intended for bedding out as soon as the weather will permit. Tender plants that were started last month should have plenty of fresh air on bright days and a gradual cooler temperature, but run no chances of being injured by frosts.

Heliotrope. Old roots may be planted in the border when the weather is warm enough. Young plants for next winter's bloom may be grown alongside of Chrysanthemums, requiring about the same treatment.

Iris. To do well it should be replanted once in three years, as the new bulbs produced each season are directly under the old one, and in a few years become too deep in the earth to grow well. Divide the roots at each planting.

Ivy Geraniums, if cut back now, will be in fine shape for summer. Cuttings propagated in sand should make pretty good plants by June.

Oleanders, when two or more years old, make fine decorative plants here and there on the lawn. Do not neglect the supply of water, and stimulate occasionally when about to bloom.

Pansies from seed should be bedded out the latter part of the month so as to get a good start before hot weather.

Petunias. Old plants of ill-shaped growth should be well cut back and re-potted, or planted out in good, rich soil. They would do well in a window or veranda-box among other plants, in a few weeks.

Propagating. Start cuttings of Coleus, Double Petunias, and any other soft wooded plants, if wanted for bedding next month. Slips of many kinds of plants for bloom next winter may be started now.

Pruning. Let this be done without delay to Roses, Clematis and such other shrubs and vines as may need it, before the sap starts.

Roses, and in fact all hardy plants and shrubs should be set out as early as possible when the soil is ready to receive them.

Shade. Most plants still under glass will need some shade from this on, and especially those completing their season's growth, or such as are likely to spot. See March.

Sowing Seeds. A hotbed is just the thing in which to start flower seeds, but every flower lover does not have the conveniences of such, and when this is the case, they may be started in shallow boxes in the house, and transplanted later. They must have plenty of light. See "Hints on Seed Sowing."

Smilax delights in a moderately damp atmosphere and a uniform temperature of fifty or sixty degrees, with frequent syringing of foliage. Unless the plants are in their first year they should have partial rest during the summer.

Sweet Peas should be sown as soon as the ground can be worked. Soak the seed first to soften the hard shell. If sown in a row five inches wide and at a distance of two or three inches apart, they can be easily cared for, and trained to wire screening or other trellis.

Tuberoses. In order to be successful with them in the Northern State, they should be started now, or earlier if space can be allowed. Provide an even bottom heat to start the roots. See March.

Veranda Box. Take cuttings and prepare such plants as will be wanted for stocking boxes in May. The earlier started, better will be the display when set out doors. Geraniums, Begonias, Ivies, Fuchsias and many other plants do well.

Water Lilies. Experiments show that *Nymphaea odorata* can be successfully grown at home by setting a half barrel in the ground and planting the roots in four or five inches of rich soil. Fill the barrel with water and as it evaporates replenish.

Wild Garden. Let every flower lover who has few feet of ground devote a portion of it to wild flowers. When gathering them in the woods, take up few handfuls of soil at the same time, to put about the roots when planting, that they may gradually adjust themselves to the change. There are species of our native plants that do not take kindly to cultivated soil, but with care in making the conditions as nearly like those in which they are found, they will gradually become used to the change. Go into the wood and look about. You will see a number of plants growing there which are handsome enough for any garden.

May.

To most of our Northern people real spring days, laden with the perfumes of bright spring flowers, do not come much before this month. At no other time in the year are the changes from one season to another so sharply marked as at this, and, so far as its practical bearings are concerned, May Day indicates to many far more the beginning of an annual cycle than the first of January, occurring as it does, when all nature is about to shake off the last remains of her wintry garments, soon to appear adorned in leafy green and fragrant flowers. The return of new life and activity that surrounds us at every turn, the balmy air we breathe laden with strange, magical powers, seem to take possession of our whole being, and to transfuse bright hopes, fresh aims and new life through the body and mind. It is wise not to trust a warm May too far, for both chilly weather and killing frosts are liable to occur during the early part of the month, which tender plants do well to escape, but the vacant beds may be put in shape to receive the plants intended for them. In the arrangement of flower beds and borders, bear in mind the importance of having the colors and shadings blend in harmony with each other. A few plants tastefully arranged will produce a more pleasing effect than many planted without regard to harmony in color. We have but to study nature to become familiar with the proper groupings, shades and colors. She makes no mistakes, and is a teacher that may be followed to such success as each individual student is capable of imitating.

Azaleas should be placed out doors as soon as all danger of frost is past. Withhold water gradually and keep them in partial shade during the summer.

Bedding Plants like Caladiums, Canna, and Castor Oil Beans, delight in a rich, mellow soil and plenty of water. Work in a good quantity of fertilizer that is well rotted, to a depth of two feet or more.

Cacti delight in heat and sunshine. The native habitation of many varieties is dry and hot. Some need more water and sunshine than others. Many of these curious plants bed out well. Growing plants should be stimulated occasionally. Such as were forced into bloom last winter should have a partly shady position and scarcely any water until time to start again in the fall.

Calceolarias require about the same treatment as Cinerarias.

Callas. By this time, growth of such as furnish flowers during winter will be about completed, and they should be placed in a shady nook, turning the pots sideways, resting the upper edge or rim on a notched block of wood about three inches thick, so that they will slant and receive only a portion of the rain that falls. Should the weather become unusually dry, supply a little water so that the soil will not dry out completely.

Camellias can be given a place beneath the shade of some tree along with Azaleas, if the weather is settled. Protect them from winds and syringe freely.

Chrysanthemums are thirsty plants, and must have plenty of water. Do not crowd them. Take good care of young plants and do not let them become pot bound. Keep them pinched back if bushy plants are wanted. Old plants should be repotted, if not already done, shaking out most of the soil and trimming off the roots. Use same sized pots if the bunch of root is reduced. These plants need shifting often or the roots reduced, otherwise they become root-bound.

Cinerarias. Keep the young plants growing in a healthy condition and as the pots become moderately filled with roots, shift into a size larger. They may be placed in a cold frame during the hot weather and shaded lightly, but should not become root-bound.

Cyclamen may be set out in the border by the middle or latter part of the month. Let it be a partly shaded place, with good, rich soil.

Ferns. Nature, as if in compensation for their lack of flowers, has given to ferns, an attractiveness of foliage possessed by no other class of plants. Here, surely, beauty is given for its own sake. Here is none of the "beauty the best policy," which we sometimes suspect in the forms and colors of flowers, put on to attract the visits and services of insects. If you have a shady nook or convenient place about a large tree, plant some ferns from the woods, allowing them a good supply of their native soil.

Floral Screens. Such climbers as Morning Glories, Nasturtiums, and ornamental gourds, furnish us with nature's drapery, and nothing produced by art can equal their elegant grace. The growth is so rapid that they will cover an arbor or trellis in a very short time, and under the control of the skillful gardener and tasteful amateur, the unsightly building or stump can be made to bloom with beauty.

Fuchsias. Such as furnished flowers during the winter should now be brought to a state of partial rest. Those intended for summer blooming should be well advanced, and unless it is preferred to grow the plants in a window or veranda box, plunge the pots to the rim in boxes of soil free from earth worms. This will keep the roots cool during the hot weather and maintain an even moisture about them, which is almost impossible to do where the pots are exposed to the warm air and drying winds.

General Reminders. Keep the tools clean. Loss of time, strength and satisfaction in doing the work must be endured if this is not done. Keep a sharp look out for insects and banish them at first appearance. Stir the soil frequently so that it can admit air to the roots of plants.

Gladiolus may be planted as soon as the ground becomes fit to work, but to enjoy a continuous bloom during the summer and fall, plantings should be made at intervals of two weeks up to the last of June. Set the bulbs about four inches deep.

Gloxinias from seed, or after blooming in the house, may be planted in a cold frame toward the middle or latter part of this month, where the former will make a slow, steady growth, and the latter gradually ripen their bulbs previous to resting until August.

Hydrangeas can now have a place on the porch or other spot where they will be protected from the hot sunshine during midday. A little liquid manure once or twice a week will produce a stronger growth and finer flowers.

India Rubber Plant. This is a good foliage plant for the window the year around. Sponge the leaves frequently to keep them clean and free from red spider.

Ixias that have completed growth and bloom should be gradually dried off and removed to a cool dry place for the summer, like Oxalis.

Oleanders that were brought to the light early, should now be in bloom. The lawn is a good place to show their beauty. Water and stimulate as you would Hydrangeas. Every other year will be sufficient for changing the soil.

Oxalis. As it completes the season of bloom, remove the pot or basket to cooler quarters, turning it on one side to ripen the bulbs and gradually withhold water. They can be stored in a cool, dry place during the summer in the same pot, or shaken from the soil, wrapped in paper, and kept dry until fall.

Palms. Give about the same treatment as for Oleanders.

Pelargoniums. Shade, coolness and water, according to conditions of the season, will suit those about to bloom, and prolong their beauty.

Planting. When setting pot plants in the open ground and the ball of earth is crusted with matted roots, rap it gently with a stick to lessen the resistance, and give the roots a chance to start out in the fresh soil.

Plunging. This is a convenient way to carry over during the summer such plants as need rest and are wanted for blooming next winter, and by the use of the plunger described in January, the annoyance and trouble from worms entering the drainage hole below can be avoided to say nothing of labor saved. If the earth has become packed solid, it should first be worked over to the depth of the plunger. By measuring the rim of different sized pots and marking the corresponding measure upon the plunger, it will be an easy

matter to regulate the depth according to size of pot plunged. Boxes of sifted soil, free from vermin, are also convenient for summering plants.

Propagation. Such plants as are wanted for next winter's flowering from cuttings should be started now.

Removing Plants to their summer quarters may begin now, first taking the more hardy sorts like Oleanders, Hydrangeas, Azaleas, etc., followed by the tender varieties toward the end of the month. A partially shaded place will suit most of them best, for the sun's rays during the middle of the day from now on will be powerful and burning.

Seed Sowing. Let it be done without delay, in rich, mellow soil, as it is generally warm enough now for all seeds. Cover lightly, firm the soil with a flat stick and water with a fine rose, or still better, a syringe having a fine spray, that the soil may not be disturbed. Do not cover too deep. There is far less risk in covering seeds too little than too much.

Tender Plants should not be set out doors until the weather is settled and all danger of night frosts are over. Toward the end of the month will be soon enough for most bedding plants. Where one has the convenience, (pots, or tin cans and a cold frame) they may be started early and forwarded so as to produce a very good effect as soon as bedded out.

Tigridias. It is generally safe to plant them now, though the bulbs are not as hardy as *Gladiolus* and are easily injured by frost. Set two inches deep.

Watering. Plants cannot live without water any better than people and perhaps not as well, all things considered, but it requires good judgment to supply it. Don't be too systematic about it, but apply when needed.

Yucca Filamentosa will succeed well in a light, rich soil.



June.

With the floral world, the month of June, embroidered with clusters of odorous roses, rich with the freshness of spring, and the luxuriance of summer, is considered one of the most beautiful of the seasons. A bright and balmy June day with the refining influences which nature is unfolding, the verdure of the fields, the marvelous bloom of the trees, together with the transcendent beauty of the early spring and summer flowers, all conspire to bring to our hearts an ardent love for the beautiful. In the North, work among the flowers during the month will be mainly in the line of weeding, loosening the soil and protecting plants from the ravages of insect pests, which should be faithfully performed if it is desired to have the flowers look their best.

Abutilons are well adapted for winter flowering if grown in pots during summer and the pots become well filled with roots. They never flower well if over potted, and should not become pot-bound.

Amaryllis after completing its blooming period, should rest during the hot weather. Those grown for summer flowering ought to be well advanced and may need a little liquid fertilizer soon.

Annuals and other seeds that were sown last month will be well up now, and it is important that they be thinned out so as to allow sufficient room for the proper development of each plant.

Azaleas should now be out in their summer quarters, which ought to be partially shaded, as beneath a tree, the shady side of a building, or under lath shutters, the lath being nailed about half an inch apart. Place a board or flat stone under the pots so that worms will not get in them.

Begonias. The flowering varieties may yet be propagated for blooming next winter. Young plants previously propagated, and in pots, will need shifting as growth advances and the roots fill the pots. They should now be out doors for the summer in a partially shady place. Tuberous sorts that were started in March or April can be set out in the border. They are also excellent for veranda boxes, and just the thing to plant here and there in such a box as described under "Summer Treatment."

Cacti. Such as complete their blooming period this month should be ripened off by giving a somewhat sunny position. It is often stated that these curious plants can do without water for several weeks at a time. This may be true of them in their native haunts where the roots can wander about and find moisture beneath stones or roots of trees, and it is no doubt so with some species, but when we have them in pots, they are differently situated and should have some water, though not as much or as often as other plants; merely enough to keep them from shriveling up. If plunged in a box of soil and set in a warm, sunny border, they will summer well and need but little attention. Cuttings should be kept for several days in a dry place to callous the wound before propagating; then they will take root more readily with less liability of decaying.

Calceolarias. Seed may yet be sown for winter flowering.

Callas, toward the end of the month, may be turned out of their pots and set in the garden beneath the shade of large plants, for it is usually very hot and dry at this season. Here they may remain until time to repot in August.

Carnations should be staked to prevent the blossoms from being spoiled by the rain. Those intended for winter flowering should be kept pinched back and not allowed to bloom much during the summer.

Chrysanthemums should now be making a fine growth, and will need watering freely. Give stimulants as required, and keep the plants pinched in pretty well, for they are quite rapid growers.

Cinerarias from seed should be treated as directed in May.

Cyclamen. Treat seedlings same as Cinerarias.

Everlastings. Seed may be sown early this month. They are usually in demand during winter for decorating.

Flowers can be kept fresh for some time if a pinch of soda or saltpetre is added to the water.

Fuchsias in pots do not like to be cramped for root room when growing. They give the best satisfaction when grown in window or veranda boxes if not exposed to the strong sunshine of midday. No soil seems to suit them quite as well as that from the woods. They may also be bedded out if protected from heavy winds and hot rays of the sun.

General Reminders. Peg down the branches of such plants as Verbenias, Lantanas, and Petunias, so that they will root where pegged, and thus give an increase of growth and bloom. To keep house plants over summer, see "Plunging" in May. Hanging baskets above all things must be kept well watered if good results are to be expected.

Hibiscus may be easily propagated from cuttings for next year's bloom. Plants that blossomed in the house last winter can be summered with other house plants in a partially shady place, or planted out in the garden so as to be somewhat protected from the fierce heat of the sun.

Plant Training. Amateurs are usually too much afraid of using a pruning knife, and in consequence we often see long-legged, ill-shaped plants with but few flowers. One thing that should be remembered is, the more pruning the more branches and larger surface for producing flowers.

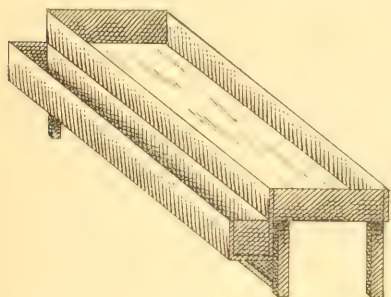
Pomegranates. Give applications of weak liquid manure occasionally as the blooming period approaches, it will strengthen the plants and increase the quality of the flowers.

Primroses should be carefully shaded from the strong sunshine. See "Shading."

Shading. Plants kept in conservatories, greenhouses and cold frames, should be shaded from the hot sunshine by whitewashing the glass or with benzine and white lead about the consistency of milk.

Staking should be done promptly where it is necessary to protect plants from being broken by the wind or severe storms.

Summer Treatment. Some valuable suggestions upon treating house plants are offered under "Some Practical Hints," but here is another point from practical experience worth considering. If your house is so situated as to leave an angle or corner facing northeast, you will find this a most excellent spot to summer the plants. Make a stand or table, about two and one-half feet wide and long enough to fit in the corner, standing a foot or eighteen inches from the building. This will hold a large number of plants conveniently



for handling as circumstances may require, besides being protected from strong winds and beyond the liability of injury by cats and dogs. A five-inch strip nailed around the edges of the table will form a sort of box that may be filled with coarse sand, gravel or moss, between the pots to prevent rapid evaporation of moisture, thus saving much labor in watering. The best looking plants in pots should be placed in the

front row, and to give a more pleasing effect, a box twelve by eighteen inches, and the same length as the table, can be attached in front so as to project below the top of the table. Fill this with good soil from the woods and artistically arrange ferns and other native plants delighting in a shady place and plenty of water.

Sweet Peas. Pick the blossoms freely, as they will bloom better if not allowed to mature seed. Save only choicest for seed. Pinching back once or twice will help to produce more flowers. This will also apply to Pansies.

Veranda Boxes will, from now on, need plenty of water or they will suffer extremely, for they are usually exposed too much to sunshine and drying winds. Whenever they require water give enough to wet the soil all through and if good drainage has been provided all surplus water will run off. An occasional watering of weak manure water will add much to the beauty of the flowers.

Watering. Let this be your motto, "Water only such plants as require it, and do so thoroughly." Don't soak them all down whether they need it or not. Some require more water than others and this can be known by first stirring the soil about them. Apply the water toward evening so that it will have time to moisten the earth all through before the heat of next day comes on. If there should be some plants next morning needing water, give them a drink.

Wax Plant. This requires a light, sandy soil and only a small quantity of water. A very rich soil, kept moist, will produce rot near the base.

Window Boxes if properly arranged and judiciously planted and cared for, will afford much pleasure. See "Veranda Boxes."

July.

In the garden at this time we should be enjoying an abundance of gorgeous blossoms laden with sweet odors from the beautiful flowers, and our floral pets will fully meet our expectation if we treat them well. Plenty of water and a liberal use of the hand-rake and weeder will stimulate them to renewed effort. Cleanliness and tidiness applies not only to the plants themselves and the ridding of their insect enemies, but also to the surroundings. All these little things will count in making the flower garden attractive during the summer. What place can be more beautiful than a neat and well-tended garden where fruit and flowers grow in abundance? The influence of such upon a home is beneficial in both hygienic and moral ways. Flowers are emblems of refinement, purity and love, and wield a magical influence over the human mind. All who have flowers in abundance can well afford to be generous with them and should bear in mind that often a few bright, simple blossoms will bring a joyous smile into the sick room, and cast a ray of sunshine upon the bed of the afflicted.

Abutilons. Such as blossomed last winter and have been resting since should now be repotted in fresh soil, first shaking out most of the old soil and reducing the mass of roots. Cut back the branches severely and encourage a steady growth from now on, so that they will be in prime condition for winter flowering again. Those in tubs or bedded out should not suffer for want of water or food during the hot weather.

Agapanthus. This being what is known as a sub-aquatic plant it should have plenty of water when in bloom.

Ageratum, if wanted for winter flowering, should be somewhat held in check now, or it will be exhausted by too free blooming. Pot a few plants and pinch the ends of the branches back.

Bouvardias will stand cutting back pretty well now if for winter flowering. Mealy bugs seem to be particularly fond of this plant and should be looked for carefully, with a view of keeping them down.

Cacti delight in full sunshine, and if growing or in bloom, will need watering frequently.

Callas should be turned out of their pots and set in a shady border, as directed in June. The object being to keep the plants comparatively dormant during the summer and to afford an opportunity of recovering from the previous season's forcing and to store up material for next winter.

Cannas and other foliage plants will be much benefited by occasional applications of liquid manure and frequent stirring of the soil. It will increase the beauty of the foliage.

Carnations. Keep the flower shoots cut off during the summer that they may be ready for blooming later.

Chrysanthemums. Give plenty of water and train as you desire them to grow. See May.

Cyclamen. Seedlings from last year's sowing should be making a strong growth for sustaining winter bloom. They do not flower as a general thing until the second season from seed.

Fuchsias. Such as are at rest and intended for winter blooming should now be repotted in fresh leaf-mold, cut back, and watered sparingly at first.

General Reminders. Shade plants under glass by whitewashing. See June. It is not too early to prepare potting soil for fall use. See directions under "Practical Hints." A pinch of salt in water will help greatly to keep cut flowers fresh. Remove all flowers as soon as faded. Don't let your plants produce seed unless you need it.

Geraniums for winter blooming seem to do better if kept in pots during the summer and treated as suggested under "Summering" in June. If set out in the garden the roots spread more or less, and when it is time to lift them many roots are broken, causing a severe check. Should early growth begin, pinch back to produce stockiness. Re-pot next month.

Gloxinias. Early started bulbs should be in bloom during this month. After blooming the supply of water should be diminished to ripen the tubers.

Heliotrope. Propagate cuttings now for winter flowering.

Hydrangeas are fine for porch decoration, where they can have partial shade. Give an occasional application of liquid manure when in bloom.

Insects are troublesome at all times and should be looked for and kept down by the use of insecticides lest they become so numerous as to overrule.

Lantanas are good pot plants, but need pruning severely to keep them in shape. Give about the same culture as geraniums.

Mulch. Stir the soil well and mulch as much as possible. It helps materially to keep the soil from drying out and prevents the hot sunshine and drying winds from injuring the roots.

Pelargoniums that have done blooming may be planted out in a half-shady place for the summer.

Petunias slipped now will make thrifty young pot plants for fall and winter bloom. White, pink and crimson of the doubles make a good assortment and do well in a basket, if well supplied with water.

Primroses. Keep them in a cool, shady place and water only when they require it. See August.

Propagating Box. A small box with clean sand is always convenient for sticking cuttings in. Sink a small pot in the center through which to supply water. See "Propagation of Cuttings."

Verbenias. To do well they must have rich soil and a sunny position. Peg the branches down and remove all fading flowers.

Violets. Propagate by pegging down the strongest branches and when roots have formed make a new bed. See August.

Watering. Let it be done thoroughly if at all. The mere sprinkling of a little water over the surface of a flower bed once or twice a day to give it the appearance of being watered, really does more harm than good; it is not enough to moisten the soil to any depth, and soon dries out again, leaving the earth in a hard, crusted, or baked condition. Loosening or stirring the soil freely will do more towards supplying the needed moisture. To be of any benefit in dry weather, water should be applied in sufficient quantities as to reach the roots of the plants, and if the soil is well stirred each afternoon or evening following, for three or four days, it will retain the moisture longer and is preferable to frequent waterings.

Chrysanthemums.—As they finish blooming gradually withhold water, cut off the tops, and store them in the cellar or other cool place until spring. They will need enough water to keep the soil from getting dust dry. Always label name and color.

Failures may be expected frequently by anyone embarking in a new enterprise who neither avail themselves of the experience of others nor take pains to become informed by reading on the subject. Judicious persons will make use of both of these means of information.



August.

Is there anything more charming in the natural world than a flower garden, with its walks, paths and avenues, and the clean, smooth-shaven strip of green-sward so nicely arranged; then, too, the flowers, in their almost unnumbered varieties and endless diversity of colors, who can describe them? What spot on earth contains so much that is really beautiful? Would that with every human habitation there were flowers to bestow their charms, blessings and enjoyment in every department of life. How they would sweeten toil and care, and smooth many a hard and difficult path in life's journey, lifting the thoughts to that world where flowers immortal bloom! How much pleasure and enjoyment could our rural people derive by simply observing and utilizing the many natural and beautiful objects which may be found near every country home! Those who will but look about can soon find many things that could be used effectively in the garden or window. The flower garden this month will many times look feeble and neglected, while perhaps the best care is really given it. This neglected appearance is due to the extreme heat, oftentimes drouth, and to the fact that the plants are feeble and weak from abundant blooming. Decaying flower stems of all kinds of plants should be cut down, and the beds kept as neat as possible. It is a poor plan to let any plants bear seed that is not wanted for use, for the effort to mature seed is far more exhausting than the production of flowers.

Ageratums will now be inclined to bloom and if wanted for winter flowering they should be checked by pinching and re-potting, if the pots are filled with roots. Similar to Chrysanthemums, they grow long branches rapidly, and need pinching back freely to produce stocky plants.

Annuals. Many varieties are easily propagated from cuttings and if wanted for winter use should be started now. See September.

Aspidistra. When the leaves are growing well, an occasional application of manure water will improve their beauty.

Begonias. Some plants grown for winter flowering, if advanced too rapidly, may be inclined to bloom now, and if preferred later they should be kept in a rather cool place to retard growth. If growth is rapid and blossoms have not set, the ends of the branches may be pinched in to produce stockiness.

Bouvardias. If for early winter flowering, re-pot now in fresh soil. Those planted out should be carefully lifted or they will wilt badly. See "Lifting."

Browallias. Seed may be sown now for winter flowering plants. They make fairly good house plants, and as the prevailing color is blue, are desirable for that purpose, especially as blue flowers are rare among house plants.

Bulbs. Don't forget that they must be planted in the fall months. Many people forget this or labor under an erroneous idea that they can be

planted in the spring just as well, only to be disappointed when that time comes. If to be purchased, order early, before the finest have been picked out.

Cacti. Do not let them stay out in cold or wet weather at this season. When the evenings become damp and chilly remove them to a dry, airy place.

Callas. The latter part of this month re-pot in rich soil and water as required. This is a plant which grows in mucky, low places in its native country, in a very warm climate, and in cultivating it we must aim to make our treatment correspond as closely to the conditions under which it would grow in its home, as it is possible to do, if we would be successful in growing it.

Carnations should be nice and stocky now and "pinching in" stopped. The last of this or the beginning of next month will be time enough for potting.

Chrysanthemums. It does not seem wise or advisable to pinch them back later than this month, as a rule; but some slender varieties may need a little pruning. Stake and tie up such as need it and give water and liquid manure freely. If aphide or thrips appear, rid them by applications of Sulpho-tobacco soap, or tobacco dust, as directed under "Insects and Remedies." If any plants were bedded out for the summer, lift and pot now, so as to get well established for flowering by the last of next month. They like to be planted firmly, in rich soil, with plenty to eat and drink and to have four or five hours of sunshine a day.

Cinerarias. Re-pot before they get root-bound. Keep them cool and lightly shaded from strong sunshine until next month.

Coleus make satisfactory pot plants for winter decorations and for that purpose, cuttings may be propagated in moist sand.

Cyclamen. Bring them from their summer quarters, re-pot in fresh soil and encourage growth.

Echeverias do not require very rich soil. Let it be light, porous and sandy. Do not over-water.

Evergreens may be successfully transplanted this month. Select damp cloudy weather, guard the roots carefully against drying even on the surface while out of the ground, and sprinkle the plants overhead every evening for several weeks after planting.

Everlastings. Gather them for drying before fully expanded, tie in small bunches and hang in the shade to dry.

Freesias. Those carefully stored away last spring may now be brought out and planted in pots and boxes. About six bulbs can be grown in the space of a five-inch pot. They are most excellent for winter use, and for a succession of bloom should be started at intervals of a week or two apart.

Fuchsias. Plants of the winter flowering varieties that need re-potting should have attention early and if not set with buds, a final, thorough and judicious pruning will make better shaped plants of them. Let the soil be composed mostly of leaf-mold. Water sparingly until growth is well advanced.

General Reminders. Keep the soil between all flowering plants and shrubs well stirred or mulched. Chip dirt from the wood-pile or decayed stumps in the woods is just the thing for mulching. Now is the time to divide and re-set the little double Daisy (*Bellis perennis*). Provide pots, soil and such other necessities as will be needed later. Trim the edges of flower beds and walks. In the absence of a sharp edging knife, a sharp spade will do. Hollyhocks and other tall flowering plants are not safe from injury by heavy winds without being tied up to stakes.

Geraniums for winter bloom should be pinched back until the latter part of the month and then allowed to make a slow, stout growth and set buds. Such as furnished flowers during the summer should be stored in a cellar or pit next month before freezing. An easy way to winter them is to lift and pack in small boxes, filling in about the roots with earth. If the cellar is dry, let the soil be quite moist; but if damp, have the earth rather dry.

Gloxinias. Those furnishing flowers early will soon show signs of rest, then gradually withhold water until they are quite dry. Seedlings of last spring's sowing should not be expected to bloom until the second year. Such as have been kept in a state of rest since May should now be started if wanted for winter blooming.

Hanging Basket. The latter part of this month, or early next, is a good time to start one. As the number of plants in a basket is usually large for the quantity of soil, it should be rich. What is wanted is rapid, luxuriant growth, and for this purpose let leaf-mold predominate. Wire baskets lined with moss from the woods give satisfaction if watered properly. *Oxalis*, *Nolana*, *Tradescantia*, *Kenilworth Ivy*, *Petunias*, *Geraniums*, *Ivies*, and many other plants do well in baskets. See remarks in September.

Heliotrope. Stips rooted now should furnish flowers during the winter.

Herbaceous Plants.—Divide and replant such as require it, so as to become well established before cold weather.

Insects often infest *Chrysanthemums* at this season, and should be quickly exterminated by the use of tobacco. See "Thrips" under "Insects and Remedies."

Ivy Geraniums.—Train them over pyramid frames of wire for fine effect. Use an eight or ten inch pot, and after covering the hole in the bottom with a flat stone, put a neat stake in the center, fasten a wire around the rim of the pot, and bring wires from this to the top of the stake. Put in proper drainage and soil, then set three or four plants and train over this framework.

Lifting.—This cannot be done any too carefully. By running an old knife in the ground around each plant a few inches from the main stem, it will cut the long roots, and if they are allowed to remain thus for two or three days the cuts will have healed and new rootlets formed, so that when lifted and potted, the shock will not be as severe as it would if taken right out of the soil and potted with all the broken roots.

Lobelia.—This is a very pretty flower for the window, especially the little blue variety. Take up and pot a few roots as a trial.

Marguerites should go into pots now, and may be treated same as Chrysanthemums.

Pansies.—For spring flowering, seed should be sown now, or if you will carefully examine the bed of past season, you may find any number of seedlings. Transplant these in a bed of well enriched and pulverized soil. Here they will make a good growth before cold weather. See September.

Perennials.—Now is a good time to sow seed of hardy perennials in some half shaded spot. Transplant in the place intended for growth and bloom as soon as large enough to handle. Have the soil mellow and well enriched.

Petunias are most satisfactory winter plants. Old plants are not as good as young ones, because they lose their vitality more or less in summer flowering, but if you have no others started, it will pay to lift and carefully pot a plant or two, cutting the branches back pretty well.

Primroses like a cool, faintly shaded cold frame. Keep them close to the glass and do not allow them to get too dry. Do not crowd or let them get root-bound.

Propagation.—Such plants as Rex Begonias, Ficus and Clerodendron can be started from cuttings now by the amateur, with better success than at any other season.

Roses, if properly grown for winter flowering, will soon begin to show their first flower buds. Do not force them with too much warmth or stimulant. Guard against over-potting. Watering must always be carefully done with these plants, because they are very particular, and too much water or drouth is likely to prove fatal. The foliage should be moistened freely.

Smilax.—Sow seed now for next year's plants, first soaking it in warm water. See "Hints Upon Sowing."

Tuberose.—Sometimes it seems almost impossible in our short season at the North to bring this excellent flower into bloom before cold weather approaches, and in such cases they may be lifted carefully, so as not to injure the roots, and bloomed in the house.

Veronicas will now be approaching their flowering season, and a little stimulant in the shape of weak liquid manure will benefit them.

Vincas may now be lifted and the roots divided, potting such as are wanted for the window and resetting the others for next season's display.

Violets.—Cut off all runners and confine your plants to nice crowns. Young plants propagated by layering, should be transplanted same as Pansies.

September.

Another season of buds and blossoms will soon be numbered among the past, and the keen, rough and ragged edges of that mighty sword—Jack Frost—will make the flowers in the garden look pretty much alike. August, the last of the summer months, is gone, and the ripening leaves should be about to don their gala dress of gold and crimson before bidding farewell. Nature in various ways often speaks words of consolation to the sad and weary hearted. The beauty of a sunset sky, the rippling of a brooklet, or the sighing of wind in the tree-tops, will oft times calm the troubled mind and induce feelings of happiness and delight. With the waning summer heat and the approach of autumnal frosts comes the work of completing the preparation of winter plants, for if good bloom and healthy foliage are desired, the plants must be put in shape for that purpose.

Agapanthus.—After blooming cut the flower stalk about half way down. Keep the plant growing four or five weeks longer to ripen its bulb, gradually withholding water; then remove to a light, cool place free from frost, where it may remain until spring.

Alyssum is useful for basket or pot culture, and grows freely from seed, or may be propagated by cuttings. See Annuals.

Annuals.—Some that are in good condition, like Pinks, Asters, Mignonette, Stocks, Sweet Alyssum, Petunias, Pansies, etc., may be lifted and made to brighten the windows during the early part of winter when flowers are usually scarce. Examine the plants carefully for vermin before removing them, and use only the best. Most Annuals are subject to attacks of aphid when in doors, and should be looked to frequently.

Azaleas, as well as other hard wooded plants, should be removed to the veranda or otherwise protected from the chills of autumn evenings for a few weeks longer. Bring them in before the days become too cool. See "Housing Plants."

Begonias.—The winter flowering varieties should now be in fine condition for housing during the season close at hand. Tuberous varieties should be taken up before they freeze, and the bulbs thoroughly dried off, when they can be packed in dry sand or paper bags, and kept in a cool, dry place, free from frost until spring. Rex and other large leaved varieties should not have too much water at the root, or their leaves will drop.

Bulbs.—Don't delay in preparing the bulb-bed and obtaining the required bulbs to be planted. Those that were put away to rest after last winter's forcing should be planted in a bed now. Pot such of the new bulbs as are wanted for forcing, and keep them in a moderately warm, dark place, or cover with a board until sprouted.

Cacti for fall and early winter flowering should have all the sunshine possible now, and if growing well, light applications of liquid manure will benefit them. Those summered in beds or borders should be lifted before fall rains come on and removed to dry quarters.

Callas should now be well established, if they were reported as directed last month. Water freely as growth advances, using warm water.

Caladiums.—Mature growth by gradually reducing the supply of moisture as the heat diminishes, preparatory to storing for the winter.

Calceolarias.—Treat as directed for Cinerarias.

Cannas.—If proper care has been given, they should now be in their glory, and when well grown there are few sub-tropical plants more suitable for the adornment of lawn or flower garden.

Carnations if summered in the border, should now be carefully lifted, potted in rich, light soil, and shaded for a few days until established. Those grown in pots along with other winter blooming plants should now have their last shift if the pots are filled with roots and seem to require it.

Chrysanthemums grown in pots should receive a final shift early, and those in beds should be potted the first thing, so as to get well established before housing and cold weather comes on. When growing they should have plenty of water, and will be benefited by giving weak liquid manure once or twice a week. Stake as required. Dust with tobacco when aphides are troublesome.

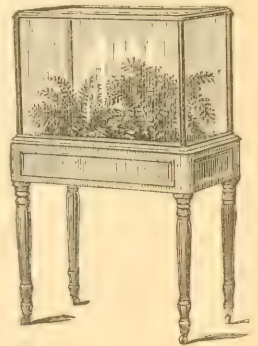
Cinerarias.—Keep them well shaded from the strong rays of sunlight, and free from aphides.

Ferneries.—Re-stock now for winter by the use of native plants from the woods and a few plants of Begonias. Low growing evergreen ferns and some pretty mosses clinging to the fallen branches of trees, may be arranged artistically and with a pleasing effect.

Fuchsias.—Speciosa and other varieties that have been treated to a period of rest during summer, should now be well advanced. Such as furnished summer flowers should be in pots, and the water supply gradually reduced preparatory to resting.

General Reminders.—Obtain a good supply of potting soil, sand, moss, pots, etc., before cold weather comes on. Frost can be expected any time after the middle of the month, and if tender plants are protected, their beauty may be enjoyed in the days of fine warm weather that usually follow.

Gladiolus should be lifted before the ground freezes hard, and after drying awhile, cut off the stalks and store in paper bags in some dry place free from frost. The little bulbs usually found about the larger ones may be pre-



served with the others for planting in the spring; they will become of flowering size in a year or two.

Gloxinias that have bloomed during the summer will now need rest. Dry them off gradually, lift and store in boxes of dry sand for at least four months. Those for winter flowering should be well advanced and kept in a moderately warm place.

Hanging Basket.—Start early this month, and water it thoroughly if you want it to do well. A mere sprinkling of the surface will not do. It must be borne in mind that a basket suspended in the air is exposed to the drying winds and hot atmosphere on all sides, and the moisture is soon licked up. When a basket needs water, take it down, set it in a pail of water and let it become thoroughly wet, then hang it up to drain. Enough water will be retained for the plants needs and no more.

Heliotrope.—Old plants are often set with buds now, and if lifted carefully and potted, will mature the flowers. Cuttings taken in July should now be well advanced.

Herbacious Plants are much benefitted by being separated and transplanted every two or three years. Large masses do not seem to thrive or bloom as well as do medium sized clumps.

Housing Plants.—In bringing the plants to their winter quarters in the fall, one usually delays as long as the weather is pleasant, until indications of a frosty night necessitates removing them for protection. Then the change of atmosphere is very sudden, and is almost sure to tell on them more or less until they become used to it; but if the plants are brought in a few weeks earlier and given a cool place, where plenty of fresh air can be admitted whenever the weather will permit without injury, they will soon adjust themselves in their new quarters, gradually becoming accustomed to the change, and barely feel the removal. See that the plants are free from insects, and have the pots look clean. Pots with a green slimy covering give a very untidy appearance.

Jerusalem Cherry.—Plants carefully lifted and potted will make a good show for several weeks. If grown in pots give a little stimulant.

Lifting Plants.—A knife run deeply around the plant a few times before lifting will prevent its wilting too much, and will often obviate the necessity of cutting it back. Lifting should be done early this month so that the plants may become well established and growing before it is time to house them. Those to be wintered in the cellar or pit may remain out longer, but should be removed before frost-bitten. Lift each plant separately with a spade, removing a large ball of earth with it, so as to retain all the roots possible. The ball can be reduced with a pointed stick or old fork, to fit the pot, which should be in proportion to size of plant. Sometimes a size or two smaller can be used, but as to that you can better judge. Always provide good drainage and fill in around the ball of earth with rich soil. Jar the pot slightly to settle

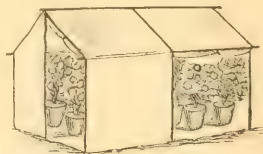
the soil firmly about the roots, and after watering, put them in the shade close together for six or eight days, then increase the space and light.

Lilly of the Valley can be had in bloom in the house as easily as Hyacinths. Pot some roots, or "pips" as they are called, at intervals of two or three weeks apart, so as to have a succession of bloom, beginning toward the end of this, or early next month. Leave them out doors to freeze once, then bring them in the house and place on the back of kitchen range or on a register. Cover the pots with a funnel-shaped card board until the pipes are started about an inch, after which give plenty of light and not too warm a place.

Oxalis.—Reset in fresh soil and start into growth early this month. It makes a fine basket plant.

Primroses should be under cover on cool nights. Shade from strong sunshine and do not over water.

Protection.—The protecting cloth described in January may be brought into good use for covering foliage beds and other plants on those frosty nights that often occur in some localities during this month, and thus prolong their floral beauty several weeks. A light frame shaped like a small house and hinged so as to fold up conveniently, may be covered with the cloth. With extension legs and an additional strip of cloth, this little house may be raised or lowered at will, to suit the plants protected. It answers admirably as a *Chrysanthemum* house.



Protecting Cloth.—The matting which comes around tea chests is very convenient for covering plants. This matting is very thickly woven, and can be used to advantage on frosty nights. Collect it of your grocer during the summer and have it in readiness.

Roses.—Such as need it may be repotted now. A good soil for them is composed of one part loam, and one part well rotted manure and turfy matter from beneath the sods of an old pasture.

Swamp Muck, as found in low places throughout the country, is of more value in the flower garden than most people are aware of. It is a valuable manure, being very rich in vegetable matter, and where the circumstances are favorable, it will pay to secure a good supply, especially if the garden soil is poor.

Tigridias.—Carefully lift and store them through the winter like *Gladiolus*, using paper bags, or dry sand in boxes.

Watering.—As the heat from the sun diminishes, so also should the supply of water to plants be reduced, for the action of heat cannot evaporate the moisture as rapidly.

October.

At this season hill and dale are usually brilliant with the mantle of glory that covers them. Beauty and sadness mingle as the days pass, few and short, and at best the pleasant farewell of the season of flowers and sunshine are the saddest of the year. This month marks the beginning of the indoor season of growth, and an important one in the window gardener's calendar. The window should be comfortably stocked with vigorous plants, just ready to open their buds and show their hidden beauty. A reserve of bulbs and other plants being kept in the cold pit for bringing in during the coming month. It is a favorable time of the year—as long as the weather will permit—for a great variety of garden work that is preparatory for another season. The preparation of beds and planting of spring blooming bulbs should receive prompt attention, and the changing, dividing and resetting of perennials, shrubs and bushes should not be overlooked.

Agapanthus.—Store in a dry, cool place, but free from frost. Water sparingly, just enough to keep the soil from becoming dust dry. But little or no light is necessary, and a good cellar is just the place.

Air.—Give plenty at all times. Pure oxygen is life itself, but let it come in the room at a safe distance from the plants, so as not to cause a draught or blow directly upon them.

Aspidistra.—Such as have made a rapid growth, and if the pot is full of roots, change to a size larger.

Abutilon.—If in pots and grown for winter use, count them among the best plants for the window. Plants which have bloomed during summer in the garden may be carefully lifted into small tubs, and wintered like Oleanders in the cellar, as little or no flowers could be expected until the latter part of winter if brought to the window.

Azalaes should have light, air, careful watering, and about forty-five degrees of heat.

Before Sweeping the thoughtful amateur will cover all plants with newspapers or light cloth, to prevent the dust from settling on the foliage and stopping up the pores.

Begonias.—Flowering varieties may be encouraged by a higher temperature and plenty of light. See September. Water the Rex or fancy leaved sorts moderately, as growth will not be as rapid as it has been, or will be later. Varieties of the Tuberous class should be at rest. See August.

Browallias.—Give these as light a place as possible and a low temperature.

Bulbous Flowers are the easiest grown, and most reliable of all winter blooming house plants. They will bloom well for you if they have even half a chance, because the flowers in embryo are laid up in the heart of the bulb, and only need a little warmth, moisture and sun to develop them.

Cacti.—When a season of growth is about completed, the plants may be removed to a dry, airy place until spring. All Phillocacti are benefitted by a semi-occasional watering if the soil becomes very dry.

Caladiums.—Those used as bedding plants should be treated as directed for Cannas.

Callas.—Don't crowd them. Water freely, using quite warm water, and if growing vigorously a little stimulant of liquid manure will benefit and increase the quality of bloom, if the soil is not rich enough.

Cannas.—After the foliage has been killed by frost the roots should be dug up, allowed to dry off, and placed in a box of dry sand, in which manner they will winter safely in a frost-proof room.

Carnations should be in their flowering pots early this month. A four inch pot or less, according to the size of plant, will be about right. Use about the same soil as for Geraniums, and be careful never to over water, as excessive moisture at the roots produces rot. About fifty degrees of heat is proper.

Chrysanthemums properly cared for during the summer months should now brighten the window with a fine display of bloom. Give plenty of water and a top dressing of old cow manure, or preferably, applications of liquid manure. It will give strength to the plants and increase the beauty of the flowers.

Cyclamen for winter blooming delight in a light place and an even temperature. Such as furnished flowers during the summer and fall should be allowed to mature their bulbs by giving less water, and afterward wintered like Agapanthus.

Dahlias.—Dig up the tubers before severe frost comes, and store same as potatoes.

Dasies as winter plants need plenty of air and a moderate amount of sunshine and water, with daily sprinkling of foliage to keep down the red spider.

Farfugium Grande makes a fine attractive specimen when well grown. It requires about the same treatment as Geraniums.

Fernery.—In starting one remember that room should be allowed for the plants to grow. A north or west window will suit them.

Flower Beds.—Dig them up deeply this fall, and at the same time work in some well rotted manure. Leave the soil in a rough state as dug, and it will be benefitted by the action of the frost and weather. It is not advisable to manure flower beds too high, as it is likely to produce a rampant growth of foliage and but few flowers. Soil of a stiff, clayey nature can be improved by working in considerable sharp sand, swamp muck and leaf mould, to render it porous, and the deeper it is worked the better will be the results.

Forget=Me=Nots.—If for the window keep them in a cool place where it does not freeze, giving air freely until wanted for decoration; then bring to the window and give them the coldest spot, with plenty of air and light.

Fuchsias.—The only variety that will give satisfaction as a winter bloomer in the ordinary window, is *Speciosa*. Allow moderate sunshine, and moisten the foliage often. There are a few varieties which, if allowed to rest during the summer, will blossom fairly well in winter, but whether it pays for the trouble is a question for each experimenter to decide.

Gladiolus.—The bulbs should be stored from frost and damp until spring. Little bulblets at the base of old bulbs are termed "spawn," and should be preserved the same as large bulbs, when they can be sown in rows like peas, in mellow soil.

Hardy Plants as winter bloomers, such as Lily of the Valley and Bleeding Heart (*Dicentra Spectabilis*), do well in the window. Pot strong roots the last of this month, somewhat crowding them. A cool place that will not force too rapidly, with plenty of light, is desirable.

Hedges.—For ornamental boundaries use Norway Spruce, Scotch Pine, Chinese and American Arbor Vitae, and for dwarf dividing lines, Chinese Arbor Vitae.

Hot-Bed Soil.—This should be made before the ground is frozen and thrown in heaps, so as to be ready for use in the spring. Cover with old boards, or if convenient store under a shed.

Hydrangeas.—Remove them to the cellar or pit free from frost, and treat same as other plants at rest.

Insects.—Keep a sharp lookout for them, and exterminate with all possible haste.

Leaves.—Gather them up as they fall from the trees for covering the bulb bed as cold weather approaches. Do not burn if you have a place to pile them, for if not utilized as a covering they will decay and make a good substitute for woods-mould where such is not to be obtained. Weigh the leaves down with alternate layers of sods, or garden soil.

Lifting Plants.—All kinds should be lifted before sharp frost, and those intended for the window ought to be in their final pots and well established now.

Lilies.—Now is the best time to plant or reset them. Any garden soil that is light and sandy will do, but it should be well drained so that water never stands at their roots, especially during the winter.

Oleanders.—Remove to the cellar for the winter and keep the roots dry.

Petunias should be well established now. Treat about the same as Geraniums.

Primroses.—Give them a light situation, and water once a week with liquid fertilizer if the plants are growing and about to bloom.

Roses, if pot grown, should be in their final pots early this month. If grown in the garden, pot in a moderately rich soil of a clay-loam made somewhat fibrous by the use of rotten sods and sand. Give good drainage, avoid draughts and syringe the leaves daily, but do not water too much at the roots. They require a moist atmosphere and an even temperature.

Smooth-Leaved Plants should be washed or sponged frequently, and the rough leaved plants delighting in moisture should be sprinkled or syringed often.

Violets need plenty of air, a low temperature and moist atmosphere, with only a moderate amount of moisture at the roots, in order to be successful.

Water Lilies.—If grown in tubs as suggested in April, the water should now be drawn off, and the tubs covered with boards and a good coat of litter to protect from severe frost.

Wax Plant should have all the heat possible in its growing season, but requires shade of other plants so as not to be exposed to the direct rays of the sun. It should have a humid atmosphere, and a dish of water will be of benefit if placed near it. Sponge the leaves frequently. In season of rest, it will bear to be kept rather dry and moderately cool.



November.

All the beauty and brightness of summer, and the golden affluence of autumn are gone, fortelling the approach of winter. Both sunlight and heat—those important elements to plant life—lessen at this season, and blossoms are generally scarce, but the queen of autumn, the Chrysanthemum, should relieve the bareness, occupying a place that few other flowers are in condition to fill. November may well be termed “The Chrsanthemum Month” as appropriately as June “The Month of Roses.” The work among flowers now will consist principally in preparing the plants for the window, with a view to securing an abundance of bloom later on.

Amaryllis.—Such as rested during the summer should be in good condition for making a free growth next month and onward. Allow them a cool place now, and do not over-water.

Astilba Japonica may still be potted and kept in reserve for later use in the window. Keep in a light cool place until wanted in the window. Crowd the roots pretty well, so as to force a top growth when established.

Begonia Rubra is as near a constant bloomer as it is possible to have any plant. Sponge or wipe off the leaves occasionally to keep them clean. Otherwise treat the same as other blooming Begonias.

Bulbs.—Though rather late, they may be started in pots or glasses during the early part of this month. After potting, remove to a warm dark place for two or three days to start the roots, then put them in the cellar until growth appears. See September.

Cacti—A moderately light place will answer if full light is not to spare. Withhold water, but not entirely. Such as are resting until February, may be stored in a light, dry cellar.

Callas.—Water freely to encourage growth, and give ample light. Use quite warm water.

Camellias.—Water moderately, and keep the foliage clean by sponging. A temperature of about fifty degrees suits them.

Carnations.—Stake, but don't crowd the leaves into bunches when tying up. Water moderately. They should show flower buds now.

Cleanliness is next to Godliness, and plants that are not kept clean do not have that healthy robust appearance which a clean plant does. Pick off all dead leaves and withered flowers. Syringing the foliage removes the dust and opens the pores or breathing apparatus. Stir the soil with an old fork or sharp stick to admit air to the roots.

Cinerarias like considerable pot room and a cool place.

Cyclamen.—Keep them in a temperature of about fifty degrees and near the glass.

Epiphyllum Truncatum.—If treated to a season of rest during the summer, and grown especially for blooming about the holidays, it should now be inclined to grow freely, and will need a sunny situation with increased heat.

Fereries, or warden cases, should now be well advanced. Admit air daily, and although plants usually grown in them are fond of moisture, be careful not to over-water, for the moisture does not evaporate as rapidly as from potted plants exposed to the sun and dry atmosphere of the room. Rex Begonias do well in the fernery if not wet too freely at the roots.

General Reminders.—Prepare for approaching cold weather by cleaning up all rubbish, dead vines or any overlooked weeds, and burn them. It is shiftless gardening to leave hanging-baskets, vases and boxes out all winter. Let all be tidiness. If the ground is not yet frozen, a good hoeing at this time will kill many small weeds that would grow beneath the snow and bear seed before they can be removed in the spring. Cuttings inserted last month or previous, should be in pots now.

Geraniums grown for winter bloom should now be making a vigorous growth. Water regularly, but not unless the soil looks dry. A stimulant of weak liquid manure will benefit them if the soil is rather poor.

Heat.—From forty-five to fifty-five degrees at night, and fifty-five to seventy degrees during the day, is about right for the general collection of plants.

Hydrangeas.—Examine them occasionally, as well as all other plants in the cellar, and supply just enough water to keep the soil from becoming dust dry.

Insects are usually less troublesome at this season, but they will bear scrutinizing carefully, and should be exterminated at the first appearance.

Ivies.—Lookout for scale. Soap-suds may be applied with an old stiff tooth brush, being careful not to bruise the bark of the plants. It may be necessary first to scrape off the scale with a pen-knife.

Lemons will not require as much water at this season as in the summer, but need all the sunshine and light possible.

Oleanders.—Examine them occasionally while in the cellar, and apply just enough water to keep the soil from becoming dust dry.

Oranges.—Treat same as lemons.

Oxalis.—Give all the light and sunshine possible. If in a hanging basket and the plants are growing well, remove the basket to the sink once or twice a week and water thoroughly. They cannot be watered satisfactorily in the window, and this is often why so many fail with baskets. See September.

Pansy plants are hardy, but they will suffer from alternate freezing and thawing of the soil, as it heaves the roots. Cover them lightly with straw or other coarse litter.

Protection of some sort is beneficial to nearly all out door plants, even those considered hardy. Leaves overlaid with evergreen branches answer the purpose well enough.

Primroses.—Water sparingly and let them have plenty of light.



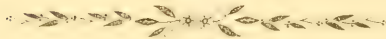
Roses.—Those grown in pots during summer especially for winter flowering, should be given a light, warm place. Monthlies that were potted from the garden may be kept in a cool place until the first of next month.

Shrubs, Vines, Bushes, and all half hardy plants in general, should be carefully bent down and pegged in position, then covered with litter of some sort. Such as are too large or stiff to bend without breaking, may be wrapped with straw or evergreen branches and tied loosely.

Syringing the foliage of most plants is very beneficial. Sponging the leaves produces the same effect, and should be attended to every day. Dust on the leaves of plants is very injurious and makes them sickly.

Wallflowers.—Keep in a moderately cool place. Water carefully and give plenty of light. Air moderately.

Water.—Plants that are growing rapidly or in blossom will require more than such as are not.



December.

The last month of the calendar year usually brings in its train the spirit of that far-away melody sung nearly nineteen hundred years ago; the peace and good will spirit. It is a season when all, or nearly all vegetation is at a standstill and nature is recuperating her expended strength and energies for another season of buds, blossoms and fruitage. In the window garden a general exertion is usually made in favor of Christmas, endeavoring to have as large a quantity of flowers in bloom at that time as is possible, and means will allow. By a little judicious arrangement of plants, so that all of them may be suited, as convenience will permit regarding a high or low temperature, sunshine or shade, quite a number can be provided for that may otherwise find lodgings in the cellar. Aim to keep as near an even temperature as possible, and regulate watering according to conditions of the plants, for the short days, cloudy and cold weather usually prevailing about this time, is trying to window gardening at the north.

Agaratums will now be set with flower buds if potted early, and will need freely watering, using liquid manure occasionally.

Azaleas should be freely aired daily if the weather will permit. Syringe the foliage often.

Begonias of the flowering section are about as satisfactory house plants as any. This is especially true of *Gandiflora rosea*. They require about the same treatment as Geraniums.

Bulbs.—Those potted early should now show signs of bloom. Give light, plenty of air, and if healthy looking, weak applications of liquid manure. Hyacinths may yet be started in glasses. Fill with soft water until it just reaches the base of the bulb, then put them in a dark, cool place for five or six weeks. Small bits of charcoal in the glasses will aid in keeping the water pure. Examine occasionally to see how they are getting on, and supply water as it evaporates, or is taken up by the roots. Frost should not be allowed to reach them.

Callas should now be making a vigorous growth, and if so, give freely of quite warm water.

Carnations.—Syringe the foliage freely, but do not water too much at the roots.

Fergeries.—Don't keep them too air tight, but lift the cover a trifle frequently to ventilate.

Flower Pits in which plants are stored should be aired on all mild days.

Frosted Plants.—This will sometimes occur even to the most careful. In such event immediately remove to a cold, darkened room, where the temperature can be kept about two degrees above freezing by means of a lighted

lamp. Spray lightly with cold water, and allow them to remain until the frost is entirely drawn out. After this they should be kept in a cool place and away from sunshine for several days.

Fuchsias when growing prefer plenty of root room, to being crowded, and should never become pot-bound.

Future Pans.—Now is the time to consider what plants to grow for next summer's garden. Draw a plan of the garden or flower beds, and decide upon where this, that and other kind of plants will show to the best advantage, and when the season arrives you will know just where everything is to be planted, without wasting any time in the arrangement of beds. Don't forget to provide a corner for wild flowers. It will become the favorite spot in the garden. See April.

General Reminders.—Air your plants freely on all mild days, but avoid drafts. Examine the plants that are wintered in the cellar or pit, occasionally.

Hanging Basket, to do well, must be taken down and watered thoroughly, as often as required. It cannot be watered properly while suspended. See remarks in September.

India Rubber Plant, or *Ficus Elastica*, will make a fine specimen for the window. It delights in warmth, with an occasional sponging of the foliage.

Insects will bear looking after closely, and exterminating speedily at the first appearance.

Palms delight in having their leaves sponged frequently.

Plant Forcing.—The forcing of all kinds of plants is unnatural, and to keep anything like good health during a term of severe forcing, plants should be in a good condition at the beginning.

Sickly Plants—Inspect the foliage carefully, withhold water and examine the roots to see if they are diseased or troubled with vermin. Never force a sickly plant in a high temperature. It takes a plant having the best of health and vigor to endure forcing.

Spraying.—An instrument that will throw a fine spray is almost indispensable in floriculture; it can be used to keep the air moist, washing the foliage, and applying insecticides with pleasing results. Rubber sprinklers are well enough as long as they last, but nothing has yet come up to the Fluid Bellows or Vaporizer.



Violets must have a cool, light place, and moist atmosphere, with plenty of fresh air to do well.

The First Thing
for You to do Now

◆ ◆
IS TO PROCURE ONE OF
◆ ◆

Cleves' Angle Garden Trowels.



These are made in THREE sizes; "STANDARD" or No. 1, with 8-inch blade, tempered and polished STEEL, heavy and strong enough for market garden use. "MEDIUM" or No. 2, with 7-inch STEEL blade, great tool for transplanting large plants, &c. The "DAISY" or No. 3, is an absolute necessity in your garden or on the lawn, nothing like it ever on the market for weeding, digging roots, &c., &c.; has 5-inch STEEL blade, and with ordinary use will not bend, twist or break. Prices very low for quality—"DAISY," only TWENTY cents; "MEDIUM," THIRTY cents; and "STANDARD," FORTY cents. Mailed postage paid upon receipt of price. Circular mailed upon request. SPECIAL OFFER.—Upon receipt of SIXTY cents, postal note, silver or stamps, I will mail a "DAISY" and a copy of this Book to any address.

STANLEY H. LEONARD,

BOX 425.

SYRACUSE, N. Y., U. S. A.

PIERSON'S

"Choice Selections in Seeds and Plants"

JUST ISSUED FROM THE PRESS.

A large and handsomely illustrated Book, with handsome embossed cover in white and gold. It is very complete, artistic, of particular interest to all lovers of choice flowers; a comprehensive guide to the purchase of the Choicest Selections and the Most Valuable Novelties in Seeds and Plants, and is an invaluable guide in making selections to plant a place. Free to all readers who will mention this book.

The edition for 1892 contains a beautiful painting from nature, showing the new French Seedling Canna "Mde. Crozy," which is incomparably the finest novelty introduced in years. This is only one, however, of a multitude of good things. Address

F. R. PIERSON COMPANY.

Tarrytown-on-Hudson, New York.



Masonic Temple Building, Chicago, Ill.

The highest business building in the world, is twenty-one stories high, of steel construction, fire-proof, and plastered throughout with Adamant.

Adamant Wall Plaster

IS JUST WHAT THE BUILDING PUBLIC AND BUILDING TRADE GENERALLY ARE LOOKING FOR AND ARE IN NEED OF.

No Falling Plaster or Ruined Decorations.
 No Waiting Weeks for Buildings to Dry Out.
 A Solid Wall that will not Crack or Shrink.
 A Wall that can be Finished in any manner desired.
 A Wall that Time may be Saved in Finishing.

No Shrinking or Warping of Doors and Casings.
 No Mice or Other Vermin Gnawing Through.
 A Wall that can be Applied by any Mason.
 A Wall of Great Strength, Adhesiveness, and Durability.
 A Wall that is Practically Fire and Water Proof.

For further particulars, apply to or address

Adamant Mfg. Co. of America, 309 E. Genesee St., Syracuse, N. Y.

Adamant Mfg. Co. of America, Bennett Bldg., N. York
 Adamant Mfg. Co. of America, Minneapolis, Minn.
 Adamant Mfg. Co. of America, Milwaukee, Wis.
 Adamant Mfg. Co. of America, W. Superior, Wis.
 Adamant Mfg. Co. of America, Toronto, Canada.
 Keystone Plaster Co., Chester, Pa.
 Keystone Plaster Co., Pittsburgh, Pa.
 New England Adamant Co., Boston, Mass.
 Connecticut Adamant Plaster Co., New Haven, Ct.
 New Jersey Adamant Mfg. Co., Harrison, N. J.
 Ohio Plaster Co., Cleveland, Ohio.
 Michigan Adamant Wall Plaster Co., Detroit, Mich.
 Michigan Adamant Wall Plaster Co., Marquette, Mich.

United Adamant Plaster Co., Baltimore, Md.
 Adamant Wall Plaster Co., Omaha, Neb.
 Chicago Adamant Plaster Co., Chicago, Ill.
 Tennessee Adamant Plaster Co., Nashville, Tenn.
 Adamant Plaster Mfg. Co., Tacoma, Wash.
 St. Louis Adamant Plaster Co., St. Louis, Mo.
 South-Eastern Plaster Co., Savannah, Ga.
 California Adamant Wall Plaster Co., San Francisco, Cal.
 Adamant Co., limited, Birmingham, England.
 New South Wales Adamant Mfg. Co., limited, Sydney, Australia.

LIBRARY OF CONGRESS



00009193273