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"FLOWERS ARE GOD'S MESSENGERS OF BEAUTY TO HUMAN
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Flowers

• IN •

Winter.

How to have Beautiful Flowers in the House. One
Pot of Geranium. Flower Stand. Window
Garden. Fernery, etc.

By EBEN E. REXFORD.

December 24, 1881.

PUBLISHED BY E. H. LIBBY, CHICAGO.

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FARM LIBRARY.

NUMBER ONE.

FLOWERS IN WINTER:

BY

EBEN E. REXFORD.

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HOW TO HAVE BEAUTIFUL FLOWERS IN THE HOUSE. ONE POT
OF GERANIUM. FLOWER STAND. WINDOW
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INTRODUCTION.

THE object of this little *brochure*, is to afford in condensed, practical shape, sufficient knowledge of the requirements of such plants as can be grown and flowered successfully in the Winter in the house and the home conservatory, and the care they require to enable the amateur to cultivate them with pleasure and satisfaction to herself and friends.

If she succeeds in cultivating plants in such a way that they afford pleasure, she will be cultivating them profitably, for there is profit in every healthful pleasure, and no pleasure is more healthful than that which comes of taking care of plants. The exercise involved is restful, because of the change from ordinary work about the house. It is educational, because, any one who grows plants because he or she really loves them,—and no one else can grow them with any marked success,—must become interested in the growth and development going on day by day, and thus a closer study of the plant life will begin, and once begun, it will be quite likely to be continued, for it is full of fascination.

Let the man or woman who does not care particularly for flowers,—who, in fact, does not know one from another,—go into a room where the windows are full of healthy flowering plants, and he will be impressed with the beauty of them at once. He may not be aware that the influence which he feels is exerted by the flowers he knows nothing about, but he will be conscious that the influence—come from where it will,—is an agreeable one. If they can afford the indifferent observer pleasure, how much more intense will be the pleasurable effect they exert upon the minds of those who know and love them. For plants grown in the household, the family soon comes to have a friendship which is entirely

worthy of the name. They seem members of the family. The death of one is an affliction, and it is missed and mourned sincerely. To those who care nothing for flowers, this may seem an extravagant statement, but those who love flowers,—and for those I am writing—will understand me, and bear me out in the truth of the assertion.

There is nothing which will afford so much beauty, at so little cost, as a window full of flowers. They furnish your room for you, so that the lack of expensive furniture is unnoticed. They give it an aspect of cheer and comfort. Go where you find flowers growing, and you will find kind hearts and hospitality. Mark that.

It is not proposed to set forth, in the following pages, a set of rules from which no departure can safely be made, or which, closely followed, will always lead to success in the culture of flowers. It is my design to tell how I have grown such plants as I write about with satisfaction to myself, and to offer hints which will be of assistance to those who would like to grow flowers, but are afraid of failure, because of a lack of knowledge and experience in their cultivation.

THE BEGINNING.

PREPARATIONS FOR WINTER CULTURE.

If you have no garden to procure plants from for use in the house during Winter, and you can not obtain any from your friends, of course money will procure plenty from the greenhouse. But most greenhouse plants do not stand the change well from their old quarters to the living-room. They look well when they are brought home, but soon the leaves will turn yellow and fall, and buds will blast. The plant loses its healthy look, and you wonder what the matter is.

Well, the matter usually is: the air of your room is so much dryer than that the plant has been accustomed to that it suffers and sickens by the change. If you procure plants from the greenhouse, be very careful to keep them in moist air for several days after bringing them home. Let them get used to the change gradually. Keep the temperature as nearly like that they have grown in as possible, and let them have plenty of fresh air, and morning sunshine, sprinkling morning and night; they will soon adjust themselves to their new quarters. In selecting plants from the greenhouse, choose those which have a stocky, robust habit, rather than tall, slender-growing ones. A plant which has been forced into unnatural growth is never desirable. It is advisable to get your plants quite early in the Fall that they may become accustomed to their new home before the season for blooming begins.

In growing your own plants, those from which flowers

are expected during the Winter months should not be suffered to exhaust themselves by Summer and Fall blooming. It is useless to expect much from such as have been allowed to bloom throughout the season. In order to have plenty of flowers in the Winter, we must manage it in such a way that our plants rest during the Summer and Fall, if possible, and start into vigorous growth with the beginning of Winter. If we can accomplish this, we succeed in one thing necessary to the well-doing of plants in Winter time.

I find that I can control my plants much better, during the Summer, if I keep them in pots. If you plant them out in the open ground, they will grow rampantly, and when cold weather is near at hand, and you have to lift them, very many of the roots will unavoidably be injured, and the change from the ground to pots is so abrupt that the plant suffers a shock to its nervous system that it takes it a long time to recover from. Before it has become established in its new quarters, it will be necessary to remove it to the house, and here comes in another severe change, which always tells on plants in a greater or less degree, and which will be especially marked on a plant which has but recently undergone the ordeal of transplanting.

By keeping your plants in pots you have them where you can manage them more easily, and very much more satisfactory. You can withhold water, and retard the growth if it promises to be too rapid. The growth of plants in pots is always slower than in the open soil, and by a proper regulation of the amount of water given, you have the growth of your plant pretty much under control. Plants in pots can be pinched in whenever such treatment is demanded, and thus a much better shaped plant can be grown than will be likely to be the case with plants lifted from the garden beds, and trimmed at the time of potting. As the pot-grown plant is obliged to undergo none of the severe changes which the plant grown during the Summer in the

open ground must, if potted for house use, it will be in a much better condition to begin Winter's work than the other.

It is a good plan to start plants in Summer to furnish Winter flowers. Insert cuttings in clear sand, kept thoroughly saturated with water, and placed in some warm place. They will soon start into growth, and in two or three weeks can be put into small pots. It is never advisable to remove from the cutting box to large pots. Better repot frequently, as the soil in the pot becomes filled with roots. You can easily tell by inverting the pot, holding your hand about the plant, and giving the pot a little rap against something. The ball of earth will slip out, and you can tell if the plant needs a larger pot by the condition the roots are in. If they have grown to the side of the vessel, and formed a network between it and the soil, they need more room. If you can see only an occasional root here and there, it will be safe to leave the plant awhile longer in the same pot. In repotting change to pots only a size or two larger.

Through the Summer, and during the warm weather in Fall, keep the plants on a moderately shaded verandah, or in some place sheltered from the full sun. Do not give much, if any, stimulation. *Aim to keep the plant growing healthfully, and no more.* If you give too large a pot, or too much water, or stimulation, the growth of the plant will be too vigorous in its early stages. Better to keep it going forward steadily, but slowly, now, and urge a more vigorous growth later. These hints, it will be borne in mind, are for the culture of flowers for Winter use, and do not apply to the culture of those from which bloom is desired through the Summer and Fall months. The aim of the treatment I am advising is to keep the plant as nearly in a state of rest as is compatible with health, if it is that kind of a plant which does not depend upon size or age for a supply of flowers; to put off, in short, a *vigorous* growth until Winter, when flowers are wanted, for, with very many of our most desirable house-plants, flowers are only produced when vigorous growth is going on.

WAYS AND MEANS.

THE ROOM, AND ITS TEMPERATURE ; LIGHT ; PROTECTION
AGAINST FROST ; STANDS FOR PLANTS ; BRACKETS ; SOIL ;
POTS AND BOXES.

HERE is but little to be said about rooms in which flowers are grown, for if the room is not adapted to the healthy growth of plants, in very few cases will any important changes be made. We must take the room as we find it, and adapt our plants to the place we have for them.

A good room in which to grow plants is one having windows opening south and east, with moderately high ceiling. If the windows do not look south or east, do not be discouraged. There are many plants which do well in windows with a northern aspect, and any bit of greenery in the depth of Winter is a pleasure to the eye, and affords a delightful contrast to the cheerlessness outside. If you have a room, no matter how poor, from which you can exclude frost, keep a few plants. By care and attention you can grow them well, and their beauty will help to make you forget the room's bareness. I have seen more beautiful flowers in the houses of the poor than in the houses of the rich.

You should aim to give your plants all the fresh air possible, even in midwinter. But in doing this, avoid drafts of cold air directly over or among the plants. Open a window or door at some distance from the plants, and let the air lose its frosty edge before it reaches them. Plants need air as much as persons do, and will not thrive well in a close

room. Two or three times a day is not too often to admit fresh breathing food.

The temperature of the room will vary, of course, but it is advisable to keep it as even as possible. If I were to advise keeping it at 60 degrees, or 75, it would make no difference with most persons: they would keep such a temperature as was most agreeable to them. So, while I merely say that a temperature of 60 or 65 is one suited to most plants which it is advisable to attempt the cultivation of in ordinary rooms, I shall give a few hints about overcoming the bad effects of a too high temperature, and leave the cultivator to apply the remedy, or try to avoid the need of it.

It is an excellent plan to keep a vessel of water standing on the stove all the time. The constant evaporation which takes place prevents the air from becoming too dry, and one of the greatest drawbacks to the cultivation of plants in living-rooms, successfully, is the dryness of the atmosphere which almost universally prevails in them. Kitchen-grown plants are almost invariably healthier than those grown in the sitting-room, because the steam from cooking and washing keeps the air moist. It is also a good plan to sprinkle the plants well every morning. A moist atmosphere has a tendency to keep down the red spider—the worst enemy we have to contend with—while a dry atmosphere is his delight. In sprinkling, it is best to use a syringe with a fine rose nozzle. Thrust this among the plants, and give the underside of the leaves a wetting, as well as the upper, for on the lower side is where the spider will be found. When sweeping, it is advisable to cover plants with a newspaper, or light cloth, to keep off the dust which would settle upon them. Plants breathe, and if we would have healthy plants, we must not only furnish them with moist, fresh air, but keep their breathing apparatus in good order. If we allow the pores of the leaves to become clogged and stopped with dust, it has the same effect upon

them as it does upon us if we prevent our lungs from performing their proper work. Once a week give your plants a more thorough showering than they are likely to get by the daily use of the syringe. Lay them on their sides in the sink, and pour a pailful or more of tepid water over them from some small vessel. See that all parts of them are washed free from dust. The labor required to give them this attention weekly, is not much, and the plants will amply repay you for it. Broad-leaved plants, like the Calla, *Ficus elastica*, Oleander, and the Ivy, can be washed with a sponge, if it is not convenient to remove them to the sink.

Plants require all the light you can conveniently give them, in order to develop themselves perfectly. If you have plants at your windows, you don't need curtains. They are, in themselves, the most beautiful curtains you can have. So don't try to compromise between plants and the fashionable window-drapery of to-day. You can not have both and have fine plants. Your curtains may be fine, but your plants will be sure to suffer from the exclusion of the light, and the yellow, spindling, flowerless appearance of plants which lack sufficient light is always painful to one who loves flowers. Take away your curtains, and let in all the sunshine you can. It will do you good, as well as the flowers. We can not have too much of it, neither can they. The only curtain I would tolerate about a window in which I grew flowers, is a thick paper shade, which could be hung up on cold nights as a protection against frost.

Most windows are put together so loosely that there are great cracks about the sash, and often the frames shrink and there is a crevice at every joint. In Fall, before the cold weather comes, go over the window thoroughly, and stop up every crack with putty. Over these cracks paste strips of cloth, and give the cloth a coating of paint, to prevent the loosening action of the frost. It is well to do this outside and in. One small crack may let in cold enough

to injure your plants severely, if not kill them. If they do not freeze, they may come so near it as to receive a check which is nearly as disastrous in its results as freezing would be. If the doors opening out of the room fit loosely in their frames, tack listing upon their edges until they fit snugly enough to keep out all cold drafts of air. Re-papering the room will often lead to the discovery and removal of crevices which would admit a large amount of cold. In most houses it would be impossible to keep plants through the Winter without keeping fire at night. A coal-fire is the best, in one respect, for it needs no attention during the night, and is steady and to be depended on. Where wood is used, you must be very careful to fill the stove well before going to bed, and it is sometimes,—indeed, quite often,—necessary that you should get up in the night and fill it again. But you may not wake up at the right time, so it is important that you should take every precaution to make the room snug and as nearly frost-proof as possible. A newspaper pinned over the plants is often the means of saving them from being nipped.

An oil-stove with heater top, is an excellent assistant in keeping out frost. It is economical, and safe, and a *good* one will be sufficient protection against cold in a snug room which can be closed tightly. But, before trusting your plants to its protection, be sure to test your stove and find out what its heating power is. Try it in some *cold* room and if it works well there, you can trust to it in your sitting-room.

The most convenient stands for plants are those made of iron, with castors. Most of them are adjustable, and can be used in half circle, or round, by opening or closing the standards upon which the brackets are. One of ordinary size will hold a dozen plants, and no window should be asked to accommodate more than that. In a cold night, they can be wheeled away from the window, to some warmer

place. Any stand should have castors for the convenience and ease of moving it as occasion requires. I prefer stands arranged with shelves, to flat, table-like stands, for the reason that plants arranged in rows of different height present a greater surface of flower and foliage to the eye, and can be more effectivately grouped and displayed. If the stand is turned daily, those on the lower rows will receive sufficient light. If your stand is in the form of a circle, you can arrange your plants to form a pyramid of verdure, and the effect will be fine from indoors or out. You can have brackets fastened to the window-frame to afford support for pots containing vines. The swinging brackets, lately introduced, are excellent things for supporting plants of moderate size. You can get brackets which will hold from one to three or four plants, and these can be swung back from the glass at night. They are very satisfactory for holding pots of vines which climb or droop.

Of course the stand will depend largely upon the pocket and the inclination of the cultivator. If one of the more ornamental and convenient stands can not be procured, an old table will do. If you really care for flowers, you will arrange for the care of them, and you can have just as fine ones on an old box as you could have if you had a \$15 stand to grow them on.

A great many persons think the successful cultivation of plants is attended with difficulty because of the trouble involved in obtaining a soil suited to the requirements of each kind.

Now, while it is true that many kinds require a soil especially adapted to their peculiarities, most kinds which it is advisable to attempt to cultivate in the house, will flourish excellently in a soil which is easily prepared, and this soil needs but little variation from the original proportions of it, as prepared in quantities to fit it for the use of such plants as I shall recommend for house-culture.

I take one-third leaf-mold, if I can get it, one-third turfy matter from under the sods in old pastures, and the other third is made up of equal parts of ordinary garden-soil and sharp sand. If I can not get leaf-mold, I use soil obtained in the corners of the fence of the barnyard. This will generally be rich, and black, but it may require an admixture of a little more sand to make the preparation light and porous as it would be if leaf-mold were used. I believe in the use of a generous quantity of sand, for the reason that it makes the soil light, and allows the admission of air to the roots, while it makes it easy for the surplus water to work its way through the soil, and out through the bottom of the pot. For geraniums, heliotropes, verbenas, petunias, carnations, coleus, and all kinds of hanging plants, I make no attempt to vary the mixture from the proportions I have named. For roses and ivies, I leave out about half of the turfy matter, and put in garden mold, because these plants like a rather stiffer and more compact soil than such plants as geraniums do. For very fine-rooted plants, like azaleas, I would put in peat, if I could get it, in place of leaf-mold and garden soil. But, as I have said, for most of the plants which will succeed well in the air of the living-room, this soil will answer better than any other I have ever tried; and it is one which has the merit of being easy to prepare.

As to the respective merit of pots or boxes, I would say that I have tried both, and I have never been able to see much, if any difference in the growth of plants in them. I prefer pots, because they are more easily handled and kept clean, and are more durable. But if the pots can not be obtained, you may feel confident of as good results from the use of a box. If pots are used, *don't* paint them, as many do. The more porous a pot is, the better, and your coat of paint fills up the pores and keeps out the air, and keeps the water in. Of course the greater share of surplus water

will drain off at the bottom, and there will be an evaporation from the surface of the soil, but, if the pot is not painted, there will be a slow evaporation from the entire surface of it, and this will be more conducive to the health of the plant than a drain from the bottom and evaporation from the surface of the soil, only, would be. The roots need air, as well as the leaves, and they can obtain considerable through the sides of a pot.

No pot, box, or other vessel, should be used to grow plants in unless it has a place for drainage. It seems to be hard for most amateurs to realize the necessity of draining the soil. If a farmer has a piece of wet land, he drains it; then the soil retains all the moisture it needs, and the surplus is carried away, and the hitherto worthless land becomes valuable. It is on this principle that we work in providing drainage for plants. If there is no drain, the soil sours, because of too great a quantity of stagnant water, and the plant it contains sickens and dies. Provide a drain, and the soil gets rid of what water it does not need, and there is little danger of damaging a plant by too profuse watering, occasionally. So, in potting plants, *always* put in an inch or two of broken brick or crockery at the bottom of the pot, with a little moss, if at hand, between this and the soil, to prevent its washing down and filling up the cracks.

THE BEAUTIES COMPARED.

WHAT PLANTS TO GROW IN THE HOUSE.

MOST amateur florists undertake too much. They would like a large collection, and they want choice kinds, like those they see in conservatories belonging to wealthy people.

After several years of experience, I have come to the conclusion that we have but a comparatively small list of plants which it is advisable for the amateur to select from, for ordinary window culture. As he or she gains in experience, and becomes familiar with the requirements of the plants under his or her care, it will do to "branch out." Plants which they would have failed with, at the beginning, they may succeed with later. It is better, in this, as in most other undertakings, to go slowly. Learn how to take care of a few less particular plants before you undertake to care for some which require more careful treatment.

Let us suppose that you have but one window in which to grow to plants. You want flowering kinds, for the most part, and you can not have more than a dozen in all, unless your window is a large one, for it is far more satisfactory to have a few plants with room for development, than a large number crowded together until all individuality is lost in a confused mass of foliage. Shall I select for you? Well, my first choice is the Geranium, because it is one of the most easily cared for plants that we have, and it is one of the most free flowering; and its foliage is always bright and

vigorous. There are other plants that I prefer to the geranium, but under the supposed circumstances, none that I would more unhesitatingly recommend. It is sure to do well if not shamefully neglected. It is *the* flower for the million. The particular varieties I would leave you to select for yourself. I think I would first choose a scarlet. The variety called Herald of Spring is my favorite among the scarlets. But there are dozens of others which *you* might consider equally as fine, possibly finer; and where there are so many to select from it is not of much use to name one particular variety. I would select the single geranium for Winter culture, because the double varieties do not bloom freely beyond November. To my mind, the single kind are handsomest. If you want a pink variety, one that is almost always in bloom, you can not do better than to take Master Christine. It is a beautiful, soft rose color, marked with white, and blooms profusely. You can suit your taste about color, for we have geraniums in all shades of scarlet and crimson, pink, salmon, magenta, and white. The "nosegay," or dwarf, geraniums are better for small collections than the larger growers, for, while the plant is dwarfish, the flowers are as large and profuse as those on the more robust kinds. Of course you want a rose geranium. No collection is complete without it. It will fill the room with fragrance, and if you want a leaf for your hair, or foliage for bouquets, it has just what you want. It is a vigorous grower, and makes a most beautiful plant. So delicate and graceful is its foliage that it needs no flowers to make it a prime favorite. While flowering geraniums do better if kept somewhat pot-bound during the Winter, if bloom is wanted, yet this and all other kinds of geraniums, and, in fact, all plants grown for foliage alone, should have plenty of root-room, for we must encourage vigorous growth to have the plants afford the best satisfaction.

Then, you want at least one Heliotrope. This favorite

flower will bloom all through the Winter, and though not showy, its fragrance and its modest beauty make it a general favorite. It likes a warm and sunny place. We have varieties with purple flowers, some with lavender, and others with nearly pure white flowers. All are fragrant. It is easily cared for, and deserves the place next to the geranium.

You want a Calla. It would be well worth cultivating if it did not bloom, because of its large, fine leaves, borne on stalks from a foot and a half to three feet high, giving the plant a tropical appearance. When we add to the attractive foliage, its large trumpet-shaped white flowers, with their delightful fragrance, we have one of the finest and most desirable plants in the entire list of kinds suitable for house-culture. It requires a large amount of water, and the pot should stand in a deep saucer which is never allowed to get empty. Let the water given it be as warm as you can bear on your hand. Keep the leaves clean, and put it in a warm place, and you will be delighted with it, for it will be constantly sending up new leaves and flowers. For the decoration of rooms, for instance the corner of a parlor, or before a pier-glass, it is hard to find a finer plant than a well-grown specimen of the Calla in vigorous growth, with two or three fully developed flowers. Perhaps it may not be generally known that what we *call* the flower is *not* so, but a sheath surrounding and protecting the spadix in which minute flowers cluster. If you have a round stand, with shelves, the calla is just the plant you want for the center.

You will want a Carnation or two. The two best varieties are La Purite, and President De Graw, the former a deep, beautiful carmine, the latter pure white. Charles Sumner is a fine variety, of a bright rose color. Astoria is yellow, edged and splashed with scarlet and white. This plant should be pinched in well during Summer and early

Fall, to make it strong and bushy. They will bloom all Winter, and are among our most valuable plants for the house.

One of our most easily grown and free flowering plants is the Abutilon, more commonly known as Flowering Maple. It has a pendulous bell-shaped flower, usually yellow, veined with crimson, and its foliage is very pleasing. It is a constant bloomer, and makes a fine large plant. There is a variegated variety, *Thompsonii*, the leaves of which are beautifully mottled with yellow, which is one of our most valuable foliage plants. It also blooms well.

Begonias, of the flowering section, though liking a rather warmer room than the plants I have named, flourish well in a mixed collection. *Weltoniensis*, a bright pink variety, is a profuse bloomer, and has very rich green foliage. *Richardsonii*, has pure white flowers, produced in large panacles.

For the early part of Winter, you want some *Chrysanthemums*. After blooming, they can be placed in the cellar and their places filled with other plants. The varieties are so numerous, and all so good, that it is hardly worth while to name any particular ones. You want a white one, and a yellow one, if you have but two.

From the plants I have named you can select a dozen which will fill your stand, and give you complete satisfaction. Of course you want an Ivy to train about the window, and I would advise you to train with it a plant of the variegated *Cobea*. This plant has leaves of a pale, pea-green, edged with pure white, forming a delightful contrast to the dark of the Ivy. I have not advised the selection of the *Fuchsia*, because it does not generally bloom well in Winter and the space it would occupy had better be given to some plant which blooms more freely. If you care to add a plant for foliage, which is easily grown, and always attractive, choose a *Ficus elastica*—the India rubber plant. It has very large, shining leaves, and withstands the effect of dry air and dust

as well as the *Geranium*. A well-grown specimen is very valuable for decoration purposes, when used alone. The *Dracenas* are also worthy of a place in any collection. They have long and narrow grass-like leaves, and fill in well among other plants, when used on stands, and are useful as single specimens.

If you have room for more plants, try a variety or two of *Bouvardia*. *Elegans*, *carmine*, and *candidissima*, pure white, are the best.

The *Cyclamen* is a valuable little plant. To grow it well, you should give it a soil containing a liberal quantity of peat and well-rotted cow-manure.

Another valuable Winter-flowering plant is the *Eupatorium*. It is of peculiarly graceful growth, and is just the plant for a bracket at the side of a window. Allow its branches to droop, and when they are covered with its feathery bloom you will consider it one of the finest of all plants for the house.

The *Petunia* is desirable in any collection, because it is always in bloom profusely, and it can be depended on anywhere. The more you cut its flowers the more you will have. It is fine for a basket when allowed to droop.

Among plants desirable for a window where not much sun enters, try the Chinese Primrose, the *Oxalis*, *Smilax*, and the *Lantana*. The *Laurestinus*, is also a most desirable plant producing a profusion of pure white flowers. The *Myrtle* is well adapted to shaded windows, and *Begonias* do well there.

For hanging plants, use *Money-wort*, *Othonna*, *Smilax* and *Oxalis*. This last plant will bloom profusely all Winter, and never fails to give satisfaction. *Othonna* also blooms freely. The principal cause of failure in growing hanging plants, is, they are not given a sufficient amount of water because it is rather difficult to get at them. The best plan is, to put them into a pail of water and leave them there

until the soil is thoroughly wet. This ensures a sufficient amount of moisture at the roots, and keeps the foliage clean and healthy. If you give a little, now and then, without taking the baskets down, the plants soon suffer, because they hang in the upper and more drying atmosphere, and all sides of the pot or basket are exposed to the heated air, and evaporation is much more rapid than from the pots beneath.

The reader of these hints may think I have named but few plants. But he or she must bear in mind that I am speaking of only those best adapted to use in the house in Winter. If I were writing of plants for all seasons the list could be greatly extended. The flowering kinds I have named are such as can be depended on, with proper care, to produce a constant supply of bloom from November to April.

THE CAMPAIGN.

ENEMIES TO BE CONQUERED; WATERING; STIMULATION;
WORMS IN THE SOIL.

HE two principal enemies which plants have to contend with, in the insect line, are the red spider and the aphid, or green louse. The former, as I have previously said, delights in a dry atmosphere; if you find him at work among your plants—and the first indication of his presence will be dry, brown spots on the leaves—you may be sure your plants have not been kept moist enough. If they are sprinkled daily, he will not put in an appearance. Be sure to wet the underside of the leaves. Water, used freely, will dislodge him. It is the only remedy. You can hardly see him, so small a creature is he, but a close inspection will show you something like grains of cayenne pepper. That is the spider. Drown him.

The aphid will trouble the Carnation most of all. Tobacco smoke will rout him. Perhaps the head of the family can be induced to smoke for the sake of keeping your plants healthy. If he *can*, let him blow tobacco fumes through your plants every day. This, with a daily sprinkling, will generally keep the aphid down. If he gains a foothold, put a newspaper over your plants, and burn tobacco under it, on coals; or better, put your plants in a large box, and fill the box with smoke. After fumigating them, wash thoroughly to remove the stupefied insects and to rid them of the smell of the tobacco. If the scale-bug attacks them,

remove him with a stick, and wash the leaves with weak soap-suds, after which rinse in clear water. But the scale-bug is not often found in small collections, and generally on such plants as the oleander, and lemon. Most of the plants I have advised are quite free from attacks of insects. If kept moist enough, there will be but little trouble from them. I have not advised the use of Monthly Roses because they are sure to be troubled by both spider and aphid, if they are about, and they are likely to lead to the injury of other plants in contact with them. They do not give very good satisfaction in ordinary rooms.

My rule for watering all the plants I have spoken of, with the exception of the Calla, is, to wait until the surface of the soil looks *dry*. Then I water *thoroughly*. Let the water feel moderately warm to the hand. Never use *cold* water. It injures the tender roots. A little observation and experience will soon enable a person to tell when a plant needs water. Most amateurs give too much, and too frequently. Two, or three waterings a week are sufficient during the Winter. Twice a week will generally be found sufficient, in most rooms, if the air is kept moist enough.

If the plants have been given fresh soil just before the beginning of Winter, it will not be necessary to stimulate them much. If they do not seem to be growing as well as they ought to, you can use Food for Flowers put up by the Bowker Fertilizer Co., and sold at most drug-stores, or add a few spoonfuls of ammonia to a pailful of water once a week. This will keep the plants growing finely, and flowering well. The prepared "food" is better than anything I have used, except leachings from the barnyard, and this kind of stimulant is not available in Winter. Do not give enough to *force* your plants. You want to secure a vigorous and *healthful* growth, not an unnatural one.

If you find small white worms in the soil, you can very easily get rid of them by dissolving a piece of unslaked lime,

the size of a large tea cup, in a pail of water. Let the lime settle, and use the clear water only. This will not only expel the worms, but it will benefit the plants. If angle worms get in, turn the ball of earth out of the pot, and pick out the intruders with a fork or hair-pin. You will generally be able to find them in the bottom and at the sides of the pot. I am of the opinion that worms do not do half the damage they are suspected of doing, among healthy plants, for the plants do not seem to show signs of injury from their presence. When a plant sickens, and has decaying roots, you will find them in great quantities. So keep your plants healthy.

THE WINDOW GARDEN.

IF one does not care to grow several plants in separate pots, and yet must have flowers, she compromises on a window-box. You can get a box made the length of the window, and a foot and a half or two feet wide, very cheaply. If more than a foot in width, you will have to furnish some support for it other than that given by the window-sill; and the box, in order to accommodate the quantity of plants usually put into it, ought not to be less than a foot and a half wide, and is all the better if wider. It should be eight or ten inches deep. The ornamentation of the sides can be whatever your taste and means will allow. In filling it, provide drainage, as in a pot. It is well to have a zinc bottom, a little lower at one corner than anywhere else, to carry off any surplus water. The list of plants available for use in these boxes is quite large, and any of those I have named as desirable for house-culture can be used.

One of the most tasteful arrangements of plants in window-boxes, that I have ever seen, belonged to a friend of mine. In the center she placed a *Calla*, growing in a pot by itself, in order that it might be given a greater supply of water than the other plants required. About it she planted *Geraniums* of the *Master Christine* variety. Around the edge of the box she set *Eupatoriums*, with here and there a *Heliotrope*. The effect was charming; in the center the stately *Calla*, with large leaves and pure white blossoms, surrounded by pink *Geraniums*, the whole bordered with

drooping branches of white flower-laden Eupatorium, contrasting beautifully with fragrant clusters of purple Heliotrope.

Money-wort, Tradescantia, Othonna and Saxifrage are fine for planting about the edges of these boxes to droop. Petunias make a good border, as they droop well, and bloom profusely. Scarlet Geraniums and white Petunias go together well in a window-box. A Dracena, or India Rubber Plant makes a fine center plant, with scarlet Geraniums about it, the whole edged with Oxalis. I had a large, square box filled with Chrysanthemums, the tall-growing kinds in the center, and the dwarf varieties about the edge, that was greatly admired when in bloom. It was literally covered with flowers, and was a blaze of beauty for six weeks.

Window-boxes are particularly well adapted for bulbs which it is desirable to bring into bloom in mid-winter. Use Hyacinths, Crocus, and a few Tulips. Plant them in November, and put the box in a cool cellar for a month. Then bring them to the light, and the leaves and flower-stalks will soon appear, and all through January your bulb box will be gorgeous with color. Hyacinths are the most desirable of all bulbs for culture in the house, in Winter. The Lily of the Valley can be flowered easily, if the pips are potted in November, and left out of doors, in some cold place, until about a month before their flowers are wanted. Freezing will not injure them.

THE FERNERY.

ANY persons would like to grow ferns and other plants, that will not flourish in the dry air of the living-room. For such the fernery, or Wardian case, is advised. If the head of the household, or some of "the boys," are handy with tools, one can easily be made at home, at little expense, that will answer all the requirements of the plants it is to contain as well as the most expensive ones. The design will, of course, be such as suits the taste of the builder. He must aim to construct a case that will keep out dust, and keep in moisture. It should not be air-tight, as many imagine; plants in a fernery must breathe, the same as those out of it.

Most ferneries are too low. I would choose one higher than it is long or wide, containing room enough for the development of a good-sized fern. I would have fewer plants than is commonly seen in ferneries, and give each one more room. The effect is much better than when every thing is crowded together.

Ferneries are especially adapted for use in windows having but little sun, because the plants that flourish in them love shade. About all the attention they require is to keep the air moist. As there is but little chance for evaporation, it is not necessary to water them often.

The pan or box in which the plants are set should not be less than six inches deep. The plants do much better when their roots have a chance to go down, than they will in shallow dishes. Very pretty fern cases can be bought

cheaply, with terra-cotta bases, and I would prefer them to home-made ones. They *look* better, and *are* better, as a general thing.

The best soil for ferneries is made of leaf-mould, silver sand and peat, in equal parts. Powdered charcoal is good to mix with the soil, as it keeps it pure and sweet. If you have not the material at hand for making the compost I have referred to, you can use soil from the edges of the woods, where our native ferns are found growing luxuriantly. Other ferns, and plants adapted to culture in ferneries, will do very well in this soil.

If there should be moisture enough on the inside of the glass to hide the plants, open the case until most of it has evaporated. As long as there is a fair show of moisture on the glass, the plants do not need more water.

Our native ferns can easily be transplanted from the woods to the fernery. Do not choose too large specimens; rather select small ones, and watch their development. Place the larger growing kinds in the center and the smaller ones about them, and cover the soil with moss from the woods or plant lycopodium.

Wintergreen, Gold Thread, Partridge-vine, Hepatica — any of these wildwood plants will flourish in the fernery. The Partridge-vine, or Mitchella, is especially desirable, because of its scarlet berries, which give such a brilliant touch of color to the interior of the case.

Begonias are well adapted for fernery use. So is Cissus discolor, with blood-red leaves and half creeping habit. The Rattlesnake plant, with dark green leaves veined with white, is a desirable plant. Begonia Rex, with its large, olive-green leaves, broadly banded with silvery white, is an excellent plant for the fernery. Marantas, Sellaginallas, Tradescantias, Dracenas, Crotons and Fittonias can be used to good advantage; but don't try to use too many of them in a small case. Give each one room to grow and develop in, and it

will be sure to please you. If you cramp it above and below, it will be unable to show you what it would be capable of doing under more favorable circumstances.

Never attempt to grow Geraniums, Heliotropes, Carnations and the like in a fernery. They will be sure to disappoint you.

I hope that the lovers of flowers will find some hints and suggestions which will be of benefit, in the preceding pages. I have written from practical experience. I have grown the flowers I have spoken of, successfully, and others may do the same. If you really care for flowers enough to study their habits and needs, you will succeed with them.

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(From W. C. Strong, Ex-President of Massachusetts Horticultural Society, and a large grower of Flowers and Roses.)

NEWTON, MASS., Oct. 11.

Have used your Plant Fertilizers upon our roses in pos. We feel safe in saying that our plants have received very decided benefit, and are now in better condition than we have ever had them at this season. A most excellent condition of wood and roots has been obtained. We are so much encouraged that we are now using it upon our rose borders for Winter forcing.

W. C. STRONG.

OWOSSO, MICH.

I have used your Ammoniated Food for Plants, and find it all you represent. I had the nicest plants in Owosso last Winter, all due to the use of your Fertilizer.

MRS. C. E. S —.

EMPORIA, KAN.

I have used a trial package of your Ammoniated Food for Flowers; it has given very satisfactory results. My plants look much greener and more healthy, and bloom more profusely since using it.

MRS. M. H —.

RAVENNA, O.

The Fertilizer was just the best for geraniums of any thing I have ever tried. There were leaves on a slip, started last Fall, which measured eight inches in diameter in May.

E. J. FOOTE.

GALLIPOLIS, GALLIA CO., O.

Can recommend it as being satisfactory. Not only destroys the insects, but revives the Flowers.

JOHN DUFOUR.

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