The Green Thumb

Vol. 7 DECEMBER, 1950 No. 12

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SUN-DRIED CANADIAN

Although long known to garden authorities, the amazing soil-conditioning properties of Sphagnum Peat Moss are only now being generally recognized. It seems too good to be true that a product so low in cost can accomplish so much! Peat Moss improves the moisture-holding capacity of sandy soils; makes stiff clay soils light and friable; retains fertilizers longer; aerates the soil; protects tender plants against cold; and performs scores of other garden functions.

Be sure of genuine "SPHAGNUM" Peat Moss . . . insist on "Sun-Dried Canadian." The high standards of Canadian peat producers ensure the peat arriving clean, soft, odorless and sterile . . . its full, natural vitality preserved by the sun-drying process. Wherever peat moss is used . . . and compared . . . the name "Sun-Dried Canadian" stands highest.

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1114 Vancouver Block, Vancouver, B. C., Canada

DECEMBER SCHEDULE

Dec. 10, Sun. Meet at Horticulture House, 8:30 A.M. Trip to photograph the Big Horn Sheep in the Tarryall Mountains. About 150 miles by car over good roads. Some scrambling in the rocks to see the sheep. You must register by Friday.

Dec. 31, Sunday, and Jan. 1, Monday. Overnight on Devil's Head. End the old year and start the new among the trees and peaks. Watch the fireworks on Pikes Peak at midnight from Devil's Head Lookout. Leave Horticulture House 2 P.M., Sunday. Home Monday AM. You must register several days in advance so that food and transportation can be arranged.

CHRISTMAS DECORATIONS

Who needs some new ideas for Christmas decorations this year? On Thursday morning, December 7th, at ten o'clock, you can find them at Horticulture House, for that is the time when Mrs. Edward Mixa will demonstrate all sorts of clever ways to decorate inside the house for Christmas. The program has been planned early in the month to give everyone plenty of time to try Mrs. Mixa's suggestions for themselves, and the time has been set for morning to make it possible for many to be on hand.

More Plant Definitions

Broadcast—to scatter seed, rather than to sow it in rows or drills.

Casein—a substance contained in milk, which, when added to sprays and dusts, add to their adhesive and spreading qualities.

Heaving—the forcing of plants out of the soil, produced by alternate thawing and freezing during the winter. At times, roots may be left exposed, which may prove injurious, if they are not pressed back into the soil. Making the soil porous and light will often prevent this injury. A mulch is a great help also.

pH—a term which represents the hydrogen ion concentration by which soil acidity is measured by scientists. The pH acidity scale measures from 1 (acid) to 14 (alkaline) with 7 as neutral.

Scabrous—rough or gritty to the touch as leaves.

Stratification—an artificial way of producing nature's method of preparing seeds for sprouting. Some seeds need a longer period of storage than others before germination will take place, and this is usually done by placing them between layers of peat moss, soil or similar materials which are kept moist to keep from drying out. Stratification is usually done in the winter so that the action of the frost will assist in splitting hard-shelled seeds.
DOES THE "ORGANIC MOVEMENT" HAVE A "LOT OF TRUTH AND A LITTLE FANATICISM"?

By George W. Kelly

Read These Statements and Decide

I NOTICED a few days ago in an advertisement of the Organic Gardening Magazine that they have 97,000 readers. This would indicate that a great many people see something worthwhile in this system of soil improvement.

As with so many other "movements" many of both the proponents and opponents have gone beyond the realm of scientific fact and have come to "believe" in certain things just because they want to do so.

There can be no controversy with the fact that most soils, especially Colorado soils, would be benefited by having more humus in them. Just for that reason alone, we are to support the "organic" program by all means. It is the scientific facts which leave deadly in "fanaticism".

Statements like: "A LITTLE FANATICISM?"? That Howard's avenues of inquiry cannot duplicate in a laboratory. "Lot Noticings" a few days ago in an advertisement of the Organic Gardening Magazine that they have 97,000 readers. This would indicate that a great many people see something worthwhile in this system of soil improvement. We give here extracts from one of the leading horticultural scientists in the U. S., and his beliefs are largely the result of extensive experimentation.

Reynolds Morse is the son of our late long-time member and vice president, Mrs. George H. Garrey. He is also a scientific-minded man, but believes that he has hit on something important here. Walter Thomas is a professor at Pennsylvania State College and a recognized plant authority.

Read all of these opinions and then draw your own conclusions.

THE ORGANIC FRONT

By Reynolds Morse

Dr. R. G. Gustavson once remarked in a Chemistry Class at the University of Denver that man could not sport a single fruit tree or vegetable plant if the tons of poisonous chemicals we feel necessary as sprays and stimulants now had been available since time immemorial. Nature somehow brought life to the present day without poisonous sprays, without readily soluble and toxic chemicals salts which leave deadly insoluble residues in the soil.

That Howard's avenues of inquiry were right I do not believe we can deny. The California orange grove records show that the number of oranges per case has more than doubled, as fruit size has shrunk, under chemical fertilizers. Some of the Washington orchards are forbidden commercial outlets because the arsenic content of the fruit itself has reached toxic levels due to absorption of the spray poisons.

At any rate, Howard made inquiry for the first time into the one basic question on which terrestrial life depends—"How do all the six elements necessary to human life become available to us in assimilable form?"

He disclosed the intense biological activity in the soil. He showed how soil bacteria digest the soil minerals and put them into soluble form. He showed the process whereby the minerals in soluble form were transferred to the plant roots by direct contact and by the mycorrhical process, including some five hundred kinds of mold. He showed how the plants synthesized these minerals and proteins into a bio-chemical form which our own digestive systems could absorb.

He discovered that nature would not permit a plant to grow in a pure chemical solution, but he also showed that such a plant had little or no nutritive value in sustaining human life in spite of its seeming perfection.

People reacted to these disclosures like the Naval officer who could not believe the atom bomb ed ship was still unsafe after they had washed it down. It looked all right, but it was not right and he had never been taught to think beyond appearances.

In the case of the plant it was the
myriad impurities of a waste filled bacteria and humus rich soil on which in the final analysis, human health depends.

From 1946 to 1950 the organic movement began to take a definable shape. Some gardeners thought it a cure all—some laughed at it. I question concepts advanced like stating that insects eat only unhealthy plants—nature’s way of removing the unfit—and that organically fed plants need no sprays, being immune—not “tasting good” to the insects. While such concepts may be true they will prove bitter pills to many gardeners and spray manufacturers alike.

The basic movement, however, was predicated on restoring to the soil the humus, the bacteria and the organic materials found in the virgin soils which have nurtured human life up to its present stage.

A glance at my Life Insurance company’s statement will show that we have pretty well licked contagious diseases. But degenerative diseases—heart trouble, kidney disease, cancer, are on the increase. The organiculturists feel definitely and have actually begun to prove that these degenerative diseases can be licked too.

But how do the organiculturists propose to lick the plague of degenerative diseases that is now our big national killer? There are not many steps to the remedy—it is simple. But because it is simple it is hard to understand, difficult to explain and almost impossible to expound to a mind unable to realize that a perfect appearing fruit may, on spectroscopic and chemical analysis be no better for nurturing the life process than a mouthful of straw.

At any rate, the basic idea is to reverse the one way flow of organic materials to the urban areas. Each day millions of tons of bio-chemicals flow into a city, the edible parts are processed in millions of digestive tracts and then are forever disposed of by countless methods from incineration to dumping into the sea. The ideal is to return all this vital natural wealth to the earth from which it came. This ideal, however, may be decades away.

THE NON-ORGANIC FRONT

By R. Milton Carlton

The question before us today is not whether organic matter is good or bad. I am certain that everyone will agree as to its importance in the growing of plants. If I were planting a 40-foot oak today you can be sure that all the well-rotted manure or compost I could spare would be mixed with the soil, and there would be at least six inches of pure compost in the bottom of the hole.

I once had a compost heap I built with a bulldozer, fifty by fifty feet and eight feet high that I spread out on a hundred foot lot. Even today I have a heap ten by twenty-five feet and four feet high. Into that pile goes all the organic matter I can scrape up, including the careless rabbit I shoot as they try to nibble my blueberries. If you want to give me a present, a load of manure is a lot more acceptable than most gifts. In short, I believe in the use of organic matter.

However, I want to talk about something that is spoiling the fun of gardening—something that is turning otherwise normal human beings into suspicious, frightened faddists who see a death’s head on every cabbage in the corner grocery store.

During the past decade we have seen in the United States the birth of a cult which holds as a fundamental tenet the theory that the continued use of chemicals as plant foods is dangerous, harmful, immoral, or all three. It further holds that the continued recommendation of such chemicals by recognized authorities is part of a secret plot by commercial firms to profit from the poisonings of men, women and children.

This cult further believes that all the needs of plants for the elements in natural organic wastes without sophistication of these natural fertilizers with chemicals.

I have gardened for over thirty years now. I do what every sensible, experienced farmer and gardener does. I make the best use I can of organic matter. I make constant use of commercial fertilizer in every possible way. It is the combination of the two that is the basis of all good production of field crops, vegetables, flowers, and other ornamentals of today.

Much of the literature on organic gardening is filled with half truths and misleading statements. The one basic truth propounded by the organic gardening cult is the importance of organic matter. Its effect on soil aggregation and porosity, thereby improving the tilth and air-moisture relationships within the soil has long been noted. The addition of organic matter to the soil is now a standard agronomic practice.

The organic gardener implies that an element such as nitrogen or calcium when supplied in an inorganic form is different in its nutritional value than the element obtained from organic material. Such an interpretation can hardly be based on experimental evidence. In the same category are statements to the effect that plants grown under a system of organic gardening are more resistant to pests and diseases and that spray programs may be omitted where only organic materials are used.

COMPOSTS, MANURES, AND INORGANIC FERTILIZERS, THEIR FUNCTION, USE AND EFFECTS ON SOILS AND PLANTS

By Walter Thomas

Extracts from article printed in Mar. '48 Green Thumb.

The deduction from the facts presented is that organic manures and chemical fertilizers both have their uses; one supplements the other. Composts contain not only humus but some supplies of the fertility elements as well. In this sense they overlap the function of chemical fertilizers which lack the decomposable plant or animal constituents on which some of the most valuable properties of organic matter depend; accordingly, organic fertilizers cannot fulfill all of the functions of compost material. But the “chemical” fertilizers have many advantages over organic manures. They can be easily applied at the most suitable time, and their great variety enables a selection of one or more nutrients to improve the balance. Moreover, they are in a readily available and concentrated form. These properties require knowledge and skill for the proper use of them.

On the other hand, composts have the advantage in that their use is
safe in inexperienced hands, for they are not too rapid in their action.

Against this advantage must be placed the fact that their composition varies considerably with the residue employed, so that the nutrients in them may not always be well balanced. Organic manures, moreover, do not always contain all the essential nutrients, especially those elements required in very minute amounts—manganese, boron, zinc, copper, molybdenum, cobalt and possibly others. These elements are fairly uniformly distributed in rocks, but in some soils they are known to be either absent or unavailable to the plant. Where nature has omitted to provide in the rocks and soils sufficient amounts of all the major and trace elements, or if present originally they have been reduced by crops or leaching, applications of composts from material produced on such land will not remedy the deficit.

The inorganic or mineral fertilizers are referred to as "artificial" by the various humus schools. According to them, the only soil amendments that can properly be applied are the "natural" ones, meaning the products resulting from the decomposition of plants with or without the intervention of animals. The term "artificial" as applied when fertilizers were first introduced to distinguish them from farmyard manure. The designation is misleading, inasmuch as some of them are just as much products of nature and, therefore, are just as natural as farmyard manure—possibly more natural. Examples are the kaolins and other potash salts mined from natural deposits in Europe and this country; Chilean saltpeter (nitrate of soda) from mines in South America; rock phosphate from deposits in this country and elsewhere, and finally guano—the excrement of seafowls found mainly in islands off the coast of Peru.

There are castes too among the humus school. Condemning the use of fertilizers that are "chemical", one group, nevertheless makes use of limestone, but objects to burnt (slaked) lime obtained from it. Some use basic slag, a product of the steel industry, and also rock phosphate, but ban superphosphate. Obtained from the latter in which the phosphorus is in a more active form.

With respect to soil bacteria, there is no evidence that fertilizers results in injury. No significant difference in their number has been found in field plots without any fertilizers and in those which have been treated with fertilizers continuously over a period of years. The number of bacteria and other organisms can be greatly increased by the addition of organic matter; but there is no virtue in mere numbers for an increase in their number during the decomposition of organic matter high in carbohydrates and low in nitrogen may deprive the plants of its nutrients for, as we have seen, the food utilized by both is similar.

The composition of the crop is affected by soil amendments in whatever form they are supplied. The need is for a proper balance between the various nutrients to supply the requirements of the plant as well as the nutritional needs of the animal or human consumer. No sound experimental evidence exists that organic manures have any special value with respect to quality or that well-balanced fertilizers are detrimental. Foods raised under the same conditions on organic manures and on chemical fertilizers have been carefully compared without any nutritional differences being found in the basic food values.

**HOW TO MAKE COMPOST**

**By Reynolds Morse**

**MULCHING** and composting are words I find very loosely used in the modern literature on organic gardening and farming. As a rule I assume a mulch to mean any organic material, from peat moss to corn cobs, used as a ground cover, and rotting in place. Compost appears to mean a pile, or heap, of organic material which is decomposed by bacterial action and put into form readily accessible to the soil bacteria.

Composting is an art in itself, but not a difficult one. It consists of building a pile of any organic material in layers with manure, earth for the bacteria, and a little powdered lime. The pile will heat and decompose rapidly. There is also a ritual of adding bacterial, or herbal, activators suggested by some adherents of the process.

And lately there has appeared a new concept in composting-activation by non-aerobic bacteria—a process coming from Italy, and quite unlike the Howard-Rodale process, which insists on ventilation of the pile by a center pipe of chicken wire and by turning the heap. In the non-ventilated pile, the pile is enclosed in a cement bin and sealed. The juice emanating is caught and saved.

Compost production is now on a commercial scale, and there are available special silos so compost, or artificial manure, can be readily made from organic wastes by any farmer.

I believe that if I described my own gardening methods, I could cover most of the features and claims of the organic method as a whole.

First, I maintain three compost piles where I compost my chicken litter, chicken roost manure, all our household garbage, egg shells, shop sawdust, grass trimmings, weeds, leaves, etc.

Since I do not have enough material to build a pile scientifically layer by layer, I build it the best I can, and when I add the litter and manure the pile heats nicely.

All garbage, weeds, etc., is put through a Keston Organic Shredder and this chopped material will "compost" in a fraction of the time required for unchopped and unmixed organic waste. About three weeks of summer weather is ample to make "artificial" manure by this method.

I maintain a four-foot finishing pile where I finish and store compost. The three starting piles are 6 by 6 by 6. The finishing pile is 4 by 4 by 4—such is the shrinkage in volume encountered in composting.

Since barn yard manure is no longer available, compost, or artificial manure must substitute and here is every evidence from the quality of organically grown produce that it does.

I use colloidal, or fine ground phosphate rock, fine ground granite dust, and fine ground limestone to make a ground mulch and for composting. These are referred to as "artificial" by the various humus schools. According to them, the only soil amendments that can properly be applied are the "natural" ones, meaning the products resulting from the decomposition of plants with or without the intervention of animals. The term "artificial" as applied when fertilizers were first introduced to distinguish them from farmyard manure. The designation is misleading, inasmuch as some of them are just as much products of nature and, therefore, are just as natural as farmyard manure—possibly more natural. Examples are the kaolins and other potash salts mined from natural deposits in Europe and this country; Chilean saltpeter (nitrate of soda) from mines in South America; rock phosphate from deposits in this country and elsewhere, and finally guano—the excrement of seafowls found mainly in islands off the coast of Peru.

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method called sheet composting is being advocated by the periodicals Organic Gardening and Organic Farming published at Emmaus, Pa.

This simply consists of spreading the organic matter and grading or discing it in to rot in place. I feel this is a definite compliment to Faulkner who advocated it several years ago in Plowman’s Folly, and who has been responsible for almost as much discomfiture in the ranks of the chemical agriculturists as Rodale himself with his own theory of sheet composting and discing as opposed to deep plowing.

Garbage and home waste must, of course, still be piled composted and I have found that grinding speeds the composting process materially.

At present a method is being worked out to compost organic material in large controlled digesters. A pilot plant is being operated in Chicago, and mechanical difficulties are the only insoluble problem to date. The compost, known as Freyer Compost, is a nice rich brown earthy material, bacteria rich, and ready to replace in the soil some of the wealth we are taking out, whether in flowers, vegetables or fruit.

Whatever the future of the Organic Movement, I believe it represents a problem of immediate national interest. Degenerative diseases must now be combated with the same effort that we have met contagious diseases. The answer to pneumonia, mastoid, etc., lay in a soil bacteria. I feel sure, too, that the answer to heart disease, infantile paralysis and cancer itself will be found in the soil. After all, the truly rabid of the Organic Cult regard insects pests—since they mostly attack only sick plants—as nature’s way of weeding out the unfit, and since they seem to be right in the basis of all empirical tests of organic method to date, it will not be surprising to find that cancer and heart disease were nature’s same method operating on the human level, and that the only way to combat such scourges is by returning to the soil all the myriad of “impurities” on which life depends.

I feel sure that this action must be taken long before science has isolated all the vitamins and hormones and the other trace substance by which threads we so precariously cling to life.

The Organic Front is worthy of all gardeners’ support for that reason if for no other, because too few people face to face with the atom bomb, are concerning themselves with the survival of tomorrow’s children.

THE SPIRIT OF THE MOUNTAINS

When man knows how to live dangerously he is not afraid to die. When he is not afraid to die, he is, strangely, free to live. There are many ways to learn how to live dangerously. Men of the plains have had the experience in the trackless blizzards that sweep in from the north. Those who go out in boats from Gloucester have known it in another form. The mountains can be reached in all seasons. They offer a fighting challenge to heart, soul, and mind, both in summer and winter. If throughout time the youth of the nation accept the challenge the mountains offer, they will help keep alive in our people the spirit of adventure. That spirit is a measure of the vitality of both nations and man. A people who climb the ridges and sleep under the stars in high mountain meadows, who enter the forest and scale the peaks, who explore glaciers and walk ridges buried deep in snow—these people will give their country some of the indomitable spirit of the mountains.

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from “Of Men and Mountains” by

Have You Ever Seen Grass Being Seeded With a Fire Hose?

No kidding! A company at Elmsford, New York, has developed a technique of seeding grass along roadsides and in parks by spraying a mixture of water, seed and fertilizer on the seed bed. A 600-gallon tank mounted on a truck is loaded with a solution containing 300 pounds of grass seed and 600 pounds of commercial fertilizer. Mechanical agitation keeps the material in suspension. A pump forces the solution through a fire hose. A tankful per acre is applied. Someday we may see their unique system adopted for seeding down new pastures or re-seeding range-land. From a Du Pont Bulletin.

COMPOST

Compost may be made in pits, piles or pens depending on the space and material available. The two pictures above show the extensive piles, pits and pens used by C. L. Dunlap, of 1105 Garrison, Lakewood, Colo. Mr. Dunlap gardens about an acre and has had a wonderful improvement in the vigor of his flowers and vegetables since using compost.

The lower picture shows the almost hidden compost pen of Mrs. E. R. Kalmbach at 2654 Forest, Denver. This pen adjoins the neighbor’s fence, yet is never offensive to them. It is almost completely hidden by shrubs in summer and furnishes all the compost needed for Mrs. Kalmbach’s small garden.

THE ASTER PARADE
By Margaret Ashley

The parade of Fall Asters is a thing of thrilling beauty with its masses of gay color. I think they may well be called the jewels of the garden—as the many brilliant buds on the mounds of green make one think of jewels. Please stop and become acquainted with them, their good will is contagious and you shall love them.

I don’t know of a more agreeable garden companion and for so many reasons. Asters will come through a late spring freeze unhurt and they stand hail storms well. Besides this they compliment almost any plant next to them. A tiny multiflora flowered yellow August Hemerocallis nodding over a dwarf Beechwood Challenger aster with a mound of dark blue忘记名称 near is lovely indeed. Or tall asters planted behind medium and dwarf ones make a beautiful display. They are such fun as you can do anything you wish with them.

You can have any height plant you like. I do not shear the tall ones at all, but let them get their maximum height. For the medium ones I shear just a little to keep them well within bounds. I shear the dwarf varieties back very hard—half way—for nice, low mounds of color.

On the dwarf asters put no fertilizer, only a mulch of sheep and peat in late fall. On the rest, early in the spring, put well rotted cow manure over them and dig it in around plants. Then when they are weedy with buds about three weeks before blooming, fertilize again by digging in quick complete fertilizer and some sheep and peat. This makes larger flowers and helps the plant complete its work. In late fall cut all plants back to the ground and mulch with sheep and peat or well rotted cow manure.

Good spacing arrangement is most important for asters. They must have air circulating freely around them. Plant in full sun and give plenty of moisture at all times. Never water so that the leaves of the plant become wet. It is rare that a plant treated in this way would ever have mildew or red spider. If you should have trouble with these pests, a good dusting of sulphur will keep them in check.

Early in May we are greeted by the low rock garden blue aster—Alpinus. It has a white flowered form, Alpinus albus. This aster does not like to be moved around. The beautiful large flowered Colabi, a bluish-purple, is next to bloom. It is six inches tall and grows in rosettes. It is a hybrid.

Aster Frikarti, Wonder of Staffa, is a must for every garden. It starts blooming the first of July and is still blooming in October. It will stand heavy white frosts. A loosely branched plant, it is about 2 1/2 feet tall and should never be sheared back. I feel too that this is another aster that should not be moved or divided. It is a charming cut flower and stays open at night. An arrangement of blue Frikarti and pink Radiance mums are delightful together.

Victor is a dwarf light blue. I always shear these so that they are low mounds of blue with yellow centers. The flowers and petals are round.

Ronald, another dwarf plant, is completely covered with lilac-pink, large flowers. The petals are not close together.

Snow Sprite is a lovely branching dwarf, and has pure white flowers with yellow centers. It blooms the last of August and is a bright, gay addition to your garden.

Constance, a dwarf shell pink is later blooming and comes in October. The new dwarf Oregon asters are the result of crossing the tall garden asters with Oregon species. They bloom by the middle of August. I have one, Pacific Amaranth, which I do not shear and it has come for two years now at around 15 inches tall. It is interesting as there are flowers with yellow centers as well as some with dark red-purple tufted centers on the same plant at the same time. It is lovely by the dwarf mum Cody which is a bluish rose. Other Oregon asters are Purple Feather, Oregon Snow-bank and Pacific Horizon. I can’t begin to give you the beauty of these different asters as each has its own charms, and all have good foliage.

Princess Margaret, about 20 inches tall, has come the same height for two years and is a soft rose with brilliant pink buds.

Skylark, a sky blue with yellow centers, has cup-shaped flowers with thick petals which don’t seem to grow in rows at all; they just look stuck in every which-way. It is tall and lovely by Harrington’s Pink.

A few other good tall asters are: Mt. Everest, white; Survivor, which is rose (but I like Harrington’s Pink better); Blue Gown and Blue Gem, rich blue, wide open flowers. While these will grow from 3 1/2 to 5 feet tall, I keep them sheared so they are 12 inches tall in bloom.

The red Beechwood Challenger can be used for tall, medium and dwarf plants by shearing. I don’t believe you can find a better red.

The new English Giant-flowering asters are real perennial treasures. Plenty, a lovely soft blue, is magnificent. It grows 3 1/2 to 4 feet tall and the flowers are two inches across. They are semi-double with tufted centers and make a delightful cut flower as they stay open at night. Peace, a companion for Plenty, is a pinkish-lavender. There is enough difference in the flower formation of these two to make them interesting together. Prosperity is a pink. Peace and Plenty planted behind Princess Margaret was an outstanding spot in the garden.

Asters provide another joy in the garden for they bring a parade of bees, too. I never knew the garden could be visited by so many bees at one time, all sizes and shapes, giving their last concert of the season.

All in all, asters are a must in the garden as you can plant them all through the perennial border—among hellebores, hemerocallis, Shasta daisies or any of the border plants. If you will plant them, you’ll have mounds of color adding glories to the garden throughout the season.

GARDEN WORK
Julia Jane Silverstein
Green Thumb Radio Program, Oct. 28, 1950

The garden can be designed for a minimum of maintenance, but I’ll warn you—there is nothing static about a garden! If you have growing things one cannot just let them go; they will need water, food and care. The bugs will enjoy them, too, so you have to help the plants combat the harmful insects.

But why do we have gardens? Because it is fun having them make proper demands on one’s time and interest. A garden is a stimulating recreation! If you aren’t willing to do some work (I call it play) for the joy of a garden, better move to an apartment.
CHRISTMAS SHOULD BE BEAUTIFUL
By GEORGE W. KELLY

THE picture on the opposite page is NOT beautiful. It is not supposed to be beautiful, but it is an actual photograph taken a year ago along highway 40 west of Denver. It shows one of hundreds of trees stripped for Christmas greens. It indicates what our beautiful highway sides may all look like if we do not adopt some more effective method of protecting them.

The idea of using native greens at Christmas time is good—it is fundamental—we would like to encourage it. But, when supplying this beauty for the city dwellers, at this holiday season, causes the beauty of our hillsides and mountains to be destroyed it is possible that the damage done may be greater than the benefits.

We believe that it is possible to have both with proper regulation. The state forester has certain very limited controls over the proper cutting of Christmas greens. As the easily gotten-to material is used there is greater and greater danger of abuses. He needs much more effective authority to demand good forestry practices in the cutting of Christmas greens. With good forestry practices many mountain slopes will supply greens for an indefinite period with little damage to the soil or the beauty of the forests.

We must establish buffer strips along our highways so that the beauty and naturalness may be preserved regardless of what may be done to the adjoining private lands by careless or greedy owners.

With proper control it is not necessary to destroy the permanent beauty of our mountains to create the temporary beauty of our cities for the holiday season. This should be the concern of every citizen.

Question: I have a place in my garden where soil is poor. Are there any annuals that will grow there?
—A Gardener in Longmont, Colo.

Answer: Yes, Amaranthus caudatus (Love-Lies-Bleeding) Dimorphotheca (Cape Marigold) Dwarf Nasturtium, Portulaca, Annual Pinks, Sweet Alyssum, Balsam, and Odehopsis. In the same letter was the question—Must all annuals be raised in flats and transplanted—No. The seed of the following plants may be sown in the open ground where plants are to grow. Sow early Alysson, California Poppy, Candytuft, Cornflower, Forget-me-nots, Mignonette, Nemo phila, Drummond's Phlox, Sunflower.

INSIST on tagged Christmas trees.
BUY only from Christmas Tree Dealers Association members.
LOOK for the place where the Christmas Tree Dealers Association symbol is displayed.

Help Protect Your Forests
A CURVED path is like the top of a hill; it invites you to look over and round the corner. The path in the front yard of Mr. Ferretti's house, with a fine wrought iron lantern standing as a signpost, curves invitingly, and leads the curious gardener to a heavy pine wood gate with handsome lock and hinges. These are not only the key to the rest of the garden, but also to its chief characteristic—the care with which each feature has been planned down to the last detail.

The gate, let into a brick pillar, opens on to an attractive garden of lawn, bordered on the far side by a low retaining wall of local flag stone, planted with low perennials and backed by an evergreen hedge.

At one end of this garden there is an attractive summerhouse. Here two wooden tubs flank the entrance. They are not the usual heavy-to-move tubs, but fitted with miniature wheels and handle so that they can be moved easily at will.

Two old wooden wheels are set into the sheltering walls of this summerhouse, so that they serve as windows. They are twelve-spoked wheels, a spoke for each month of the year, from which to look out on the changing garden seasons.
A LIVING FOSSIL

From Shade Tree Digest as presented by the Swingle Tree Surgery Company

The young tree pictured here is a living fossil, a Dawn Redwood, or if you prefer the scientific name, a Metasequoia glyptostroboides. A species long believed to be extinct, though known to paleobotanists through fossil remains, a few living, mature Metasequoias were found in 1941 in Szechuan province of central China. After the laborious and time-consuming process of positive identification had been completed, seeds were collected, a quantity brought to the United States, and planted. This tree developed from one of those seeds.

In 1941, Professor T. Kan of the Department of Forestry of the National Central University (China) saw on a roadside in Szechuan province, a large tree which the natives called Shui-sa or water fir. His interest aroused, Professor Kan was instrumental in having herbarium specimens collected which led to a thorough search and, finally, positive identification of the species. In later expeditions approximately 1000 Metasequoias, large and small trees, were found, all confined to a relatively small area. It was learned that the natives were still cutting the trees for interior finishing purposes, and fearing extinction of the species, a committee was formed with the objective of perpetuating this “living fossil.” The discovery of living Metasequoias has been classed as the “most remarkable botanical discovery of the century.”

Although apparently rather closely related to the redwoods of California, the Metasequoias are of much more ancient origin; fossil remains have been found that indicate the species lived over wide areas in North America and Asia some twenty million years ago. In appearance and habit, Metasequoias are somewhat similar to the Baldcypress of the South; they bear cones and shed their leaves each Fall. At maturity they reach about 100 feet in height and 6 feet in diameter according to measurements taken of specimens in China; the largest found there was approximately 114 feet tall and just under 7 feet in diameter at breast height.

Robert E. (Evergreen) More will be able to report on the Metasequoia’s liking for Colorado conditions a few years hence. He has a small plant at his arboretum at Buffalo Park, and two in Denver. The Buffalo Park tree has no protection at all and will experience rigorous conditions indeed. One Denver tree has been planted in a semi-protected location, and the other in a lath house. All have done well since April—when they were first set out, and have gone into leafless dormancy. It will be interesting to hear what they do during the trying late winter and spring seasons.

WHY GARDENS DIFFER

By M. WALTER PEISMAN

“Do You Call That a Garden?”

We were looking at a picture of a modernistic garden on the Riviera in France. It showed a series of different levels, built in cement, with flowers interpersed here and there. The high point was crowned by a statue of what seemed a human figure.

It was a garden, done by a famous French designer.

The same question is raised about certain Italian gardens—of undoubted fame—which show dozens of fountains, and marble features but not a single petunia or zinnia.

“How do American gardens differ from English gardens?” The query bothered Miss Joan Parry, of Stoke Poges, and she decided to go and see for herself. She found outstanding gardens in Colorado, where she had been told no gardens could be expected.

And so the problem becomes more complicated the more we find out about gardens in other countries and in former periods. There are the hanging gardens of Babylon, the floating gardens of Mexico, the hunting estates of Assyrian kings, the parterre gardens of Versailles, the cottage gardens of England, the rock-and-water gardens of Japan.

And there is our modern garden of the ranch house type.

It isn’t too confusing if we do a little sober thinking about this. Gardens, like people, are different. They will be different. They will change as people’s ideas change, as conditions change. On the other hand, similar conditions cause similar gardens.

Here are the three big factors involved:

1. Physical Environment, such as climate, topography, kind of soil, water supply, and the availability of plant material. It stands to reason that a garden with palm trees and oleanders looks different from one with conifers and Iceland poppies. Even such a minor thing as the acidity of the soil limits or encourages certain plants or plant types.

2. Character of People in regard to nationality, tradition, taste, social conditions. The Japanese developed an enclosed naturalistic rock garden in keeping with their general art feeling. The English cottage garden reflects their love of flowers. Italian gardens have a tradition of the use of water and of clever visual balance.

3. Function or purpose. King Louis XIV of France was interested, before all, in impressing others with the magnificence of the Gardens of Versailles. He entertained lavishly and the gardens had to have broad roads, impressive fountains, spectacular statues. Compare that with the double-purpose Colonial garden; here vegetables, fruit and flowers were important.

Now, where do we go from here? What can we expect of the American garden? Is there such a thing as “the American garden”? Perhaps we are developing a common function or purpose as a people. Even then there will be many variations.

Variations are particularly to be expected in consequence of our different physical environment. Not only are plants different north and south, east and west—but so are the people.

Only the future will tell whether folks in the year 2500 will say of our efforts: “Do you call that a garden?”
FOR CHILDREN OF 8 TO 80

LIFE OUT OF DEATH

Here are several examples of the persistence of Nature. This is a rather dramatic example of the continuous process of life coming from death. The small spruce trees growing in the stumps were probably 20 years old. It's a question whether or not they will send roots down through the stump into solid soil before the stump entirely decays and falls away.

The spruce growing in the dirt roof of the old miner's cabin must be at least 35 years old and in quite vigorous health. What happens when the roof collapses is any one's guess.

THIS YEAR'S AUCTION
ANOTHER SUCCESS

The weather man was on our side for the Plant Auction this year, held on Saturday afternoon, October 21st.

The City Officials kindly consented again to let us use the Greek Theatre of Civic Center for the sale. John Swingle and George Amidon were our first-class auctioneers and volunteers including Clair Robinson, Earl Sinnamon, Mrs. A. L. Barbour, Mrs. E. O. Cook, Mrs. J. Swingle, Mrs. Paul Hastings and many others helped in collecting material, handling goods and other details of the sale. A net profit of very nearly $600.00 was realized for the Association and this amount will help substantially in meeting our deficit for the year.

List of Donors to the Plant Auction

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| Thompson, M. B.                    |

KOELEREUTERIA PANICULATA

Also called Varnish Tree, Chinatree and Pride-of-India.

This is a borderline tree in hardiness. In protected places it does well but in open exposures will frequently winter-kill partly or entirely back. It is well worth a little extra care as it gives a grand display of flowers in summer and the large seed pods are ornamental all winter.

The flowers are small but in a large loose cluster. They are yellow with a small red eye which makes them interesting. The pods are triangular, a golden brown and contain three jet black seeds about the size of peas. The leaves are compound, about the size of sumac but interestingly notched.

In growth it makes a small broad-headed tree adapted for use as specimens or for parking planting.
POISONOUS PLANTS FASCINATE

Book Review by M. Walter Pesman


The very attractive cover of this revised earlier bulletin on Poisonous and Injurious Plants is indicative of the material inside. Once you leaf through it you find all sorts of interesting and valuable material and you are fascinated by the large number of plants which may do injury to livestock, and sometimes to man.

Comparing this new edition with the old bulletin 455, issued September 1939, a few things are apparent.

First of all, it is pleasant to observe that a number of plants are dropped that used to be considered culprits: evidently they are on good behavior and are not now thought guilty. Such are for instance, Arnica, Croton, and Blazing Star. Even their pictures are dropped from the "rogues gallery." Buckbean is also exonerated.

On the other hand Copperweed is added, Oxytetha acerosa, a good looking, fragrant relative of the ragweeds, occurring along the Gunnison and Colorado River, with light yellow blossom plumes.

We are glad to find more information on the fight against "scum" algae in ponds and pools, and to have it pointed out that the weedy Poison Hemlock, so very common now in our region west of Denver, — and even in Denver gardens, — may well be confused with Angelica and Sium. Another interesting bit of information is about the recognition of selenium by the sulphurous smell on crushing leaves of such plants as loco, and saltbush. How we used to be disturbed by this smell in our car after collecting them!

Write for this bulletin, you'll like it! And, by the way, there is also a U.S. Department of Agriculture Bulletin on Stock-Poisoning Plants, No. 1245.

A FASCINATING NEW BOOK just out, TREE TRAILS and hobbies, by Ruth Cater is on the way to this library from The American Garden Guild. The publishers claim for it, "a warm and thrilling story by an author who has spent a lifetime in the wonder spots of the world studying trees." They tell us that "nothing has ever been published like it." It is a full treasury of tree lore; the whole absorbing story of over 200 American trees.

HELEN FOWLER

A TOP BOOK ON FLOWER ARRANGEMENT

REMEMBER the days of the tall, awkward vases on the piano, containers for milkweed, bittersweet and a few other flowers which nearly all women raised in their gardens? And the bouquets dreamed up, long before "Say it with flowers" came in? Nobody cared much how the flowers were arranged for no one mixed flowers then. Iris, peonies, roses, larkspur were used alone; one kind at one time and one kind to a vase with its top scalloped, fluted and flaring. Then later the artificial flowers came in style. I still run on to "home made" Tulips and Daffodils in set off parlors. No magazine articles and no books on how to arrange flowers had been written but all this time a new art was being born until one day, with a long story in between, a blue ribbon was given to an arrangement in shades of blue in an antique Chinese copper bowl. Flower arranging had arrived.

Today we have scores of books written by real artists—we have them all in our horticultural library, by Hine, Burrough, Conway, Ferguson, many others. Tatsuo Ishimoto in his "The Art of Flower Arrangement" shows 150 photographs each designed for many kinds of flowers. Then for a professional approach for the beginner Patricia Roberts in her Flower Craft covers wreaths, dried arrangements, bon voyage bouquets, flower etiquette and so much more. To learn the easy way to be an artist we have Dorothy Biddle and Dorothy Blom for a real study source with actual practice exercises in design, scale, balance and all the other six basic principles, F. F. Rockwell and Esther Grayson have written The Complete Book on Flower Arrangement. Here for the first time found in any book is the discussion on the theory of color, a special chapter by nationally known experts with their special secrets, and arrangements for each month with flowers in season. Nothing so good has turned up yet.

In all of these books there is special advice on color and the color artist knows that if directly related colors are used for a close harmony great drama in all decoration can be created. By the study of the basic principles laid down in all of these books a clump of flowers may be changed into a living work of art.

HELEN FOWLER
ANSWERS TO LETTERS AND TELEPHONE CALLS ON GARDEN QUESTIONS

So many inquiries come in asking, "is it too late to do this, too late to do that." Now we know with certain bulbs we have no choice—they must be planted in the fall; minor bulbs should go in early while the major kinds may be planted as long as the ground remains open. Fall, perhaps, is better for Peonies and certain Lilies. Perennials put in too late are subject to those seesaw freezes and thaws. Our dry, cold winds too, often make it tough on late-set perennial plants.

One reader of the Green Thumb writes, "bell-shaped flowers have a special attraction for me. Canterbury Bells are especially pretty but with their short life they do not seem appropriate for a perennial garden, what may I use in their place?"

"Makes of Beautiful Gardens"
Roy E. Woodman and Bros.
Landscape Gardeners and Nurseryman
Denver, Colo. SPruce 5509

I am planning to construct a rock garden this fall, can I use tufa rock?
B. H. Golden.

Yes, but I hope you will not use it in the sun where it looks dead because of its gray appearance. Used in moist shade, however, it gathers mosses and becomes as good looking as the moss-covered rock we usually use here in Colorado.

How far away from the center of a shrub do its roots extend? I ask this question to avoid root injury in transplanting. William Gifford, Omaha.

Roots of trees and shrubs are figured to extend to the spread of the branches.

How is liquid fertilizer made without resorting to a troublesome barrel etc.? Will this fertilizer be beneficial to my house plants? Mrs. Lewis House, Pueblo, Colo.

Most house plants are grateful for this kind of feeding, given as often as once a month. To prepare in a simple way—almost fill a two-gallon pail with water; add enough dry cow manure to fill one pound coffee can and to steep 12 or 14 hours—an over-night stand is about right. Apply only when soil around plants is moist. H. F.

HORTICULTURAL NOMENCLATURE

Alpestris—of the mountains
Amphibious—capable of living on land and in water
While Aquatic means living in water, Aquatilus means living under water
Aurantiacus—orange colored
Bellum—beautiful
Biferous—fruiting twice in a year
Blade—the broad part of the leaf
Caesiatus—of a sky-blue color
Campestris—belonging to the plains
Capestris—belonging to the plains
Caveous—of the cave, usually referring to the Cape of Good Hope
Chlorophyll—the green coloring matter of leaves and stem
Citrus—of a lemon-yellow color
Ciliatated—fringed with hairs
Claw—the narrow base of a petal
Collinus—growing on low hills
Cordate—heart shape

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AMIDON'S CASH NURSERY
Extends the Season's Greetings To Every Reader of THE GREEN THUMB
GARDENING, AN ART AND A SCIENCE
By Alex N. Klose
from "Rotary Tillage Talks", by Milwaukee Equipment Mfg. Co.

GARDENING is sometimes spoken of as an art and not as a science. To a certain extent this is at least partially correct, for it is generally known that given the same kind of plant, the same type of soil and the same kind of environment, one person will grow a plant better than a less informed grower.

Actually the methods employed may differ very little and consist chiefly in minor adjustments of the growth factors such as soil, moisture, temperature, light, plant nutrients, insect and disease control. Nevertheless, these differences, although small in themselves, materially affect the final development of a plant. This final result is brought about by a more or less sympathetic understanding of the growth requirements of a plant under varying conditions—an understanding, incidentally, acquired only after years of experience.

A gardener observes that a better or quicker result is obtained if a particular gardening practice is carried out in some particular way, and this knowledge stored often subconsciously, becomes a part of a general understanding of a cultivation of plants. This is an extremely slow and sometimes discouraging way of learning, one which consists in gaining knowledge from what are really unplanned, trial and error experiments. Most everyone has had some experience in this regard.

For example, if a root crop like beets, carrots, dahlia is or glad ran "to top" because through experiments an overdose of nitrogen fertilizer was applied, thereby upsetting the balance of plant nutrients in the soil, and if in the future this excessive application of nitrogen can be associated with a vigorous leaf growth, the gardener has learned by the trial and error method.

A knowledge acquired in this manner rests on a large number of half-remembered objectives, mostly unconnected and without any basis of comparison. It is a knowledge which, when it doesn't produce satisfactory results, is expressed by the saying, "I didn't have any luck growing that."

All of which makes it very evident that a clear, intelligently planned method of procedure should enable the gardener to arrive at the principles underlying the culture of all plants with a greater precision, and certainty, thus replacing the slow, very uncertain rule of thumb, or the "guess and by gosh" method.

This suggests that gardening is a complex science. In fact it might be said it is a combination of all sciences. A really good gardener should have some knowledge of chemistry, geology, pathology, bacteriology, biology, entomology, and just about every other "ology" found in the science books.

The aim of science as applied to gardening is to replace the hit and miss methods of procedure with something which is both more definite and at the same time more certain. It is a rule of science that a thing is not true until it can be repeated at will. This rule can be applied when a working knowledge of the growth factors is acquired.

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### THE GREEN THUMB December, 1950

#### PROGRAM

**The Aster Parade.**
- Dotted Hawthorn May 12 & 19
- Pink Hawthorn May 12
- Washington Thorn May 13
- Prickly Hawthorn July 13
- Downy Hawthorn May 14 & 18
- Thicket Hawthorn May 14 & 19
- Willow Hawthorn May 15
- Fleshy Hawthorn May 16
- Red-fruited Elderberry May 21
- Rosy-bloom Crabapple May 22
- Native Oregon Grape July 6
- Willows of Oregon July 9
- Wax Current July 9
- Serviceberry July 9
- Buckeye July 6
- American Cranberrybush July 6
- Golden Chain Tree July 7
- Red Osier Dogwood July 8
- Bunchberry Early July 8
- Wafering Tree July 8
- Colorado Hawthorn Oct 8 & July 9
- Washington Hawthorn July 9
- Common Baldwinina July 9
- Western Chokecherry Oct 9 & July 6
- Green's Mountain Ash Oct 9 & July 27
- Thistle Alder Nov 28

#### SOIL:
- A Tired Soil, M. Walter Pesman Sept 16
- Soil Conservation: A Tired Soil, M. Walter Pesman Sept 16
- Scientific Tree Care June 7
- Deciduous Tree Care June 7
- Evergreen Tree Care June 7

#### SHRUBS:
- How Good are the New Roses? M. Walter Pesman Feb 23
- Shrubs for Colorado Feb 9
- Shrubs as a Winter Decoration Feb 20
- Open Season on Menodora Feb 30
- Lilacs, D. M. Andrews May 6
- Hawthorns, M. Walter Pesman May 11
- Consider the Fall Fruits for Color & Interest, Geo. W. Kelly Oct 6
- The Villains of the Barberry Family, E. A. Lungren Sept 20
- Chokecherry Apr 19
- Rhododendron album April 21
- English Hawthorn May 11
- Cockspur Thorns May 12 & 18

#### CARE:
- Shade Tree Care, Geo. M. Fisher Feb 31
- Scientific Tree Care June 7
- Do You Know When to Prune?

#### ROCKY MOUNTAIN HORTI-CULTURAL CONFERENCE:
- Third Rocky Mountain Horticultural Conference Jan 29
- Third Rocky Mountain Horticultural Conference March 31

#### STATE PARKS:
- The Need for State Parks, Harold Lathrop Sept 22
- Common Bladdersenna Oct 9
- Common Mallow July 11
- Common Plantain July 11
- Purslane July 11
- Common Mallow July 11

#### WILDERNESS AREAS:
- Preservation of Living Museum through Nature Conservation Bill Oct 21
- The Value of Wilderness, Sigurd R. Osler May 28
- Freedom of the Wilderness, George W. Kelly Nov 16
- Trail Riders Explore Maroon Bells—Snowmass Wilderness Area, George W. Kelly Nov 18

#### WILDFLOWERS:
- Gladiolus July 9
- Snapdragon July 9
- Snapdragon July 9
- Snapdragon July 9

#### CRAFTS:
- Learn to Make Your Own Pottery July 11
- Learn to Make Your Own Pottery July 11

#### SCIENCE:
- The Common Mold, Thos. A. Martin April 8
- The Need for State Parks, Harold Lathrop Sept 22
- The Need for State Parks, Harold Lathrop Sept 22
- The Need for State Parks, Harold Lathrop Sept 22

#### ><h4>ROCKY MTN. HORT. CONFERENCE:</h4>
- Professor A. M. Binkley, Chairman
- Third Rocky Mountain Horticultural Conference Jan 29
- Third Rocky Mountain Horticultural Conference March 31
- Professor A. M. Binkley, Chairman

#### DR. A. C. Hildreth, Chairman

9:00—Registration.
9:45—Welcome by President Mrs. John Evans.
10:00—“Make and Use Compost for Better Lawns and Gardens,” by a Panel of Experts.
10:45—Intermission of half hour.

#### Tuesday Afternoon

- Professor A. M. Binkley, Chairman
- 1:30—“Bees, Flowers and Plant Breeding,” by S. W. Edgecombe of Utah State College.
- 2:30—“Weed, Insect and Disease Control by Chemicals,” by W. Van Pelt of the General Chemicals Corp.
- 3:00—Amateur Section.

#### Wednesday Morning, January 3

- Fred Johnson, Chairman
- 9:30—Announcements.
- 9:45—“Weed Control for Everyone,” by W. F. Cherry of Rohm and Haas Co.
- 10:15—“Making Our Highways Attractive,” Pictures shown by Sam Huddleston.
- 10:45—Intermission.
- 11:15—Professional Section.

#### Wednesday Afternoon

- 1:30—Outdoor Demonstrations of Sprayers, Power Saws and Other Tools.
- Contests of Skill Among Arboriculturists.
GARDENING IN DECEMBER

THE active work of caring for growing plants may be over for the season, but there are still things to be done that will keep the thumb green. Some trimming may be done, house plants require attention, there are Christmas decorations to arrange and lots of fine garden books to read.

I still see the overly neat gardeners out with the hose washing leaves off the lawn. It worries me to see this for it not only wastes water but seriously damages the lawn by also washing off all the valuable mulch from the surface of the soil. If all the leaves MUST be kept off the lawn a bamboo rake is much more efficient.

When the weather is not too cold it is a good time to get the trees trimmed and scraggly limbs cut from the shrubs. Trees that have outlived their usefulness may be efficiently taken out now. Evergreens and shrubs that are tall and limber should be braced to prevent snow damage. Low evergreens that are under the eaves should be protected to prevent snow breaking them down.

If roses have not been hilled up it should be done now. If the soil around them is frozen bring in some from the vegetable bed or some other vacant place. Climbing roses may be given some shade to prevent a sunburn. Tender barked young trees should be wrapped. Be sure that the ground around everything is wet when it freezes up.

House plants should be getting adjusted to the indoor conditions and be blooming. Check again for insects. Find out the habits of each plant and give it the temperature and water that it likes. Most house plants like more humidity in the air than is found in the average home. A teakettle on an electric plate steaming for a few hours a day will help.

Surely there are some things in the garden that will help to make cheerful Christmas decorations. Coralberries, snowberries, barberries, hawthorns and cotoneaster are all good. Sprays of juniper and pine from the necessary trimmings may be attractively arranged. Put some evergreen boughs and some artificial red berries in the barren window boxes.

If there are evergreen trees in appropriate places arrange to decorate them with Christmas lights and ornaments. Start a bird-feeding station in one of the evergreens. They will learn to come to it in bad weather.

There are classes in various phases of gardening offered by the schools, universities and Horticulture House. There are books available in the library at Horticulture House that will help in your next year’s gardening and will be interesting reading now. Let us help you plan your reading and study.

Talk to your neighbor about the work of this Association and show them how they can get help for their garden problems.

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