Our Colored Illustrations

Mr. Arthur Hill, President of the D. Hill Nursery of Dundee, Illinois, has generously lent us the plates for the seven colored pictures shown in this issue, to make it a climax number of the year. The trees shown in these illustrations range from the tall and stately White Fir—native of Colorado and thought by many to be our most beautiful native evergreen—to the dwarf Hill Japanese Juniper, that never exceeds twelve inches in height, and furnishes a rock garden gem.

Next below the tall White Fir comes the serviceable Pfitzer Chinese Juniper, reaching an ultimate height of six or seven feet, with a spread of fifteen. The Pfitzer is perhaps the best “all purpose” juniper that grows.

Somewhat smaller than the Pfitzer is the Hillbush Juniper, a fine evergreen for foundation planting that takes many years to exceed four-foot dimensions.

The Dwarf Japanese Yew is still smaller, but plant it on the north or east side of your house. The rarity of the Yew in Colorado lends distinction to its possessor.

The Mugho Swiss Mountain Pine can be kept small indefinitely by vigorous shearing, while the Andorra Creeping Juniper (also to be kept from the south and west exposures) never grows higher than eighteen inches. Thank you, Mr. Hill.

White Fir

“He that plants trees loves others beside himself.”—German proverb.

The beautiful Abies concolor, White Fir, is my favorite evergreen. This native tree of Colorado, which has attained a height of 100 feet, is pyramidal in shape with a dense habit of growth which makes it an excellent specimen tree. The needles which occur singly along the twigs are 1 1/2 to 2 1/2 inches long, soft to the touch, and vary from a silvery to a deep green. When a needle drops from the twig it leaves a smooth scar, one of the distinguishing characteristics of a fir. The mature cones are cylindrical, 3 to 5 inches long and stand erect. They are clustered at the top of the tree. Being evergreen it provides ideal quarters for birds the year around.

Planted in our cities the White Fir reminds us of cool mountain streams, of the fragrance of the forest, and the majesty of our mountains.

ALICE WOOD.

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WE ARE ASTONISHED! PUBLIC DOESN'T KNOW US

Do you suffer from nematodes in your nasturtiums? Are your Gladiolus corms (please, not "bulbs") afflicted with Fusarium rot? Is your alluring agriculture affected by amateurism?

Or have you that "Green Thumb" to which plant life responds; that friendly feeling for forestry and flora that touches the depths of your nature—and bores your mining engineer friend to pro-fane mutterings?

In either case you should belong to the Colorado Forestry and Horticultural Association. If you are a member, keep right on reading. This will intrigue you:

Recently we learned that many people think the Colorado Forestry and Horticultural Association is (1) a branch of the federal government; (2) a division of state government; (3) a sort of patriotic organization that plants trees in prominent places as a public service, or (4) a semi-official body acting as adviser to municipal, state and national experts on forestry and horticultural matters. There also seemed to be a vague suspicion that the Association’s operating funds are derived from some public exchequer.

These misconceptions do not reflect on public intelligence; rather, they indicate a lack of promotional vigor on the part of members or management (all of them private citizens who will be much surprised to discover that they are presumed to be public officials). Green Thumb devotees are apt to spend more time comparing notes on their vegetable gardens, flower beds or botanical discoveries than in proselytizing new members; and those are the men and women who constitute the Colorado Forestry and Horticultural Association.

To be even more precise: The CFHA membership consists of folks like you and me, who like to see things grow, and more particularly, who enjoy making things grow or learn why they won’t. Their reasons may be personal or professional but are always animated by that deep-seated something which has its roots in Nature and natural phenomena.

The CFHA is presently comprised of adults banded together by their community of interest in trees, flowers, landscaping, shrubs, hedges, lawns, vegetables, fruits, soil erosion, plant diseases, fungus growths, etc. Friday is the principal day for meetings at the new headquarters building, 1355 Bannock Street, Denver, with speakers of note on subjects from Aphis to Zygophyllaceae. Members are listed from Alabama to Wyoming, with the greatest concentration in Denver, Colorado Springs, Fort Collins and Grand Junction. Those who are unable to attend lectures, meetings and study classes know what is going on through “The Green Thumb” issued bi-monthly, beautifully illustrated and delightfully informative.

The Colorado Forestry Association has been in existence since 1884. Several years ago—to give the organization a wider sphere of usefulness, the Horticultural phase and title were adopted. Membership rolls include 1300 names, representing occupations that run the gamut of human endeavor—farmers, ranchers, housewives, brokers, capitalists, truck gardeners, active and retired businessmen and college professors; all have a common avocation in their Green Thumb works or ambitions.

Until recently, the Colorado Forestry and Horticulture Association had no real home. Thru the generosity of Mrs. John Evans, Horticulture House on Bannock Street was rehabilitated and made available to the organization. It is equipped with a magnificent library, available to members at all times.

Recognizing that CFHA has been a little selfish, self-centered or clannish in failing to share the great benefits and enthusiasm concentrating at Horticulture House with a larger number of Green Thumbers, the organization is launching a membership campaign—actually asking men and women of kindred spirit to join.

The goal is a doubled enrollment—approximately 1400 new members—2,600, divided into the following classifications: Supporting 1000 at $2.00 a year; Sustaining, 400 at $5.00 annually; Patrons, 100 at $25.00, and Donors, 20 at $100 a year.

One immediate result of the additional membership will be monthly issues of “The Green Thumb” instead of six times a year and even better material. (Lack of funds has prevented use of some color cuts the editorial staff has been fairly itching to run.) Another benefit will come through expansion of the library. Furthermore, increased income will mean more personnel to render a greater variety of services more promptly (inquiries and answers, for instance).

Financial support provided by the

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These Things Your Association Has Done
Since Moving Into Horticulture House

ARRANGED public meetings in Horticulture House to bring the latest and best in Horticulture to members and friends. These meetings have been conducted every Friday evening, and usually one other evening each week. We have had an attendance of from 20 to 60 interested people. Answered hundreds of questions by phone, mail and person. Furnished speakers for dozens of Garden Club meetings. Provided radio talks many times when requested. Collected hundreds of wild flowers and pressed them for use in the Herbarium. Collected and cataloged well over a thousand books in the library. Inspected many mysterious ailments of trees and flowers. Collected and published important articles regarding Colorado plants and gardening practice. Encouraged gardening through participation in flower shows. Contacted government officials in regard to help in solving pest problems of trees. Attended national Horticultural conventions to bring back the latest word in Horticultural practice. Assembled an extensive collection of horticultural magazines. Brought together people of similar interest, such as the Rose enthusiasts, and the commercial nurserymen and landscapers. Interested city officials in improved plans of city forestry. Arranged tours of city parks and parkways. Conducted wildflower and garden-study tours. Made contacts which will lead to the establishment of a Rocky Mountain Arboretum. Assisted in planning Memorial highways through the state. Provided publicity regarding Horticulture to the daily papers. Issued warnings through the papers of serious infestations of plant diseases or pests. Arranged for the setting aside of botanical reserve areas.

George W. Kelly, Editor

When should Dormant Spraying Be Done?

Dormant spraying may be done any time after the leaves have fallen and before they come out again in the spring. There has been a feeling among some that fall spraying is not as effective as late winter or early spring, but in the collective experience of the several ornamental tree spraying men of Denver there is no foundation for this thinking. Many of them even prefer early fall spraying and feel that the results are better. The principal factors governing the time of street spraying are: the trees should be dry; very little wind should be blowing; the temperature should be above 36 degrees.

STATE FOREST SURVEY

As mentioned in the March-April issue, Mr. Alfred B. Hastings of Washington, D. C., working with State Forester Everett J. Lee, completed during the summer a very thorough survey of the state’s forest resources. As soon as his work has been checked and approved, Mr. Hastings will submit a report which will be available for reference.

Mr. Hastings, representing the Society of American Foresters and the Charles Lathrop Pack Foundation, made this survey without cost to the State, following a formal request made by former Governor Vivian.

Our Association sponsored the project.

Continued on Page 23
The first three units of a state-wide system of botanical reserves were set aside by appropriate ceremonies in the Garden of the Gods at Colorado Springs, August 27th.

One area consisted of a knob hill in Palmer Park which was almost entirely covered with the native Yucca or soapweed. The second area was in Cheyenne Canyon and contained some very fine specimens of White Fir as well as a large assortment of native shrubs and trees. The third area was in the Garden of the Gods and contained a number of very old One-seed Junipers. Some of these had been rather accurately estimated to be from nine hundred to one thousand years old.
IN MY GARDEN
Saturday Afternoon Observations by the Weekend Gardener.

How does it happen that my neighbor's garden still has some bloom in it and looks well, and mine looks like the last rose of summer? I must go over there and see what they have that I do not have. Mainly mums, I guess, but there is evidence of many other things that are now gone. They had petunias, marigolds and zinnias to fill in between the perennials. And here are stems which look like perennial phlox that must have been in bloom until just a few days ago. I'll bet that they could tell me of a dozen or so other flowering plants that bloom late and make their garden look colorful in the fall. Suppose I go over and talk with them. I don't like the way they dress, or the color of their car, but they must be good gardeners, and good gardeners are essentially good people.

I wonder if I couldn't also find some good books that would tell me about new plants and new ways to use them. Of course, most of the good books are written for other climates, but it is possible that some of the folks down at Horticulture House might help me to weed out the good from the bad and find the things that apply to my situation. There is little that I can do for my garden now, but I might study about what others have done, and find out how to improve it. Now would be a good time, while my mistakes are fresh in my mind. How about asking them at the "House" to suggest a course of study for me this winter. It would be fun, and I might learn how to make a better garden next year. I guess that I'm never too old to learn unless I think so. I'm going in right now and start a list of things that I can do to make my garden better. If I add to this list all winter as I talk to my good gardener neighbors and read some of the gardening books, I should be able to have a garden next year to be proud of.

THE Alpine Flower Trip led by Mr. and Mrs. C. Earl Davis August second and third was successful since everyone worked. On a collection trip it is necessary not only to identify the specimens but to press and dry them as quickly as possible. We were fortunate in securing the use of the Zipfelberger cabin on Loveland Pass Saturday night. Any flower lover who hasn't seen alpine plants in their native habitat has a rare treat in store. Since the flowers were especially beautiful this year, the specimens, when mounted, will be of use to our members for many years. This trip will be long remembered by Mrs. Leroy McWhinney, Susan McWhinney, Emma Moddelmog, John Davis, George W. Kelly and Alice Wood.

One of the most enjoyable trips of the season was the tour of Denver Gardens led by Mrs. Helen Fowler August seventeenth. We were first shown how important design is in a garden, large or small, then the use of interesting plant material in sun and shade. I particularly remember the terraced, formal garden of Mr. and Mrs. George H. Garrey, the beautiful rose garden of Mr. and Mrs. Donald C. Bromfield, the begonias and ferns at Dr. and Mrs. Leonard Van Stone's and the garden of Mrs. Roger D. Knight, so full of bloom though planted only this year. Also notable for its bloom was the garden of Mr. and Mrs. E. M. Thomason. There were lovely color combinations and good plant material in the gardens of Mr. and Mrs. Eric Douglas and Mr. and Mrs. Oscar Temple. After visiting the gardens the party of thirty-six people enjoyed a picnic lunch in City Park.

On September thirteenth, fifteen people assembled at Horticulture House before visiting the beautifully landscaped estate of Mr. and Mrs. Jan van Houten. Our leader, Robert E. More, pointed out the many kinds of evergreens there including the One-seed Juniper, Rocky Mountain Juniper, Black Hills Spruce, Bristlecone Pine, two magnificent hedges of Pfitzer and Tamarix Juniper and the finest Eastern White Pine in this area. In the garden of Dr. and Mrs. T. E. Best we saw various grafts of Juniperus virginiana and J. scopulorum. The group then visited Mr. More's city home where he has over fifty varieties of evergreens, including his "perennial border" of dwarf evergreens.

It is leaders such as these who are contributing so much to the Colorado Forestry and Horticulture Association.

ALICE WOOD.

GORE RANGE BOTANICAL TRIP

Superb scenery, perfect weather, glorious moonlight nights, excellent camp cuisine a la Timm, competent leadership of Charles Brown, and congenial companionship served to make the Gore Range trip a memorable one for the ten nature enthusiasts who participated in the Labor Day weekend camp. The party left Horticulture House on Saturday morning, August 30th, and returned Monday evening, September first.

Our camp was made in the National Forest area near Black Lake in Summit County. The two days were spent in exploring the trails into the surrounding hills and collecting specimens and seeds. Composites were the dominant plant family at this time of year, many of which gave us some good work-outs in identifying species. The area showed promise of a good collecting ground for an earlier season another year.

Kathryn Kalmbach
**COLORADO TREES**

Citizens of Colorado have recently become more conscious of the value of street trees to their community. As towns and cities become larger and older it becomes more apparent that there must be some central control of the planting and care of the community’s trees.

Many of the progressive cities of the East have developed ordinances permitting the city to have control of their trees, and these places have found that many benefits have resulted. When epidemics and threats of epidemics appear, as the Elm scale, Maple scale, Cedar-apple rust, Juniper aphids have in Denver recently, it strikingly emphasizes the absolute necessity of the city officials being able to take measures to prevent an irreparable loss of valuable trees. When we can only wait and hope that individuals will care for these things we are sure to have damage done which will cost a great many times the amount of a city wide control of trees.

One city in the state, at least, has an improved tree ordinance which enables it to look out for the welfare of its trees. That city is Colorado Springs.

To be sure, the city control of trees will increase taxes by a small amount; but the loss involved in an inadequate program is many times this amount, and the city suffers because of unsuitable and damaged trees.

Mr. L. C. Chadwick, of Ohio State College and one of the leading authorities on trees in the United States, has said in part:

“It is the duty of every citizen, and especially those interested in shade tree welfare, to see to it that their city has an effective ordinance regulating tree planting and maintenance.

Many cities are becoming conscious of the need of such an ordinance.

“It would seem to be highly desirable that all cities provide sufficient funds to employ an arborist who should have as his duties the supervision of all planting and maintenance of city trees. The city arborist should be well trained for his job and should draw a salary commensurate with his position. There are few positions in city government of more importance to the welfare of the community.

“As a result of a survey made a few years ago, it was apparent that CITIES SHOULD EXERCISE COMPLETE CONTROL OVER ALL CITY FORESTRY OPERATIONS. By complete control is meant that the city should appropriate sufficient funds so that ALL REMOVAL, PLANTING AND MAINTENANCE OPERATIONS SHOULD BE DONE BY CITY EMPLOYEES UNDER THE DIRECTION OF THE CITY ARBORIST.

“Other important considerations have to do with the choice of trees, their location and methods of planting. With city control, it is a simple matter to regulate against the planting of unsatisfactory species and varieties of trees. Where everyone is allowed to plant whatever trees they wish in front of their property, the result can only be a hodge-podge.”

In this issue we print some suggestions for the planning of street planting in Colorado towns. This is the first installment of a series of four articles which will treat of proper trees for every location, care of trees, pests, trimming and such things. We hope later to combine these sections into a tree planting manual for Colorado.
THE GREEN THUMB

ROSE NOTES
By W. H. Hoitink, Trans., Denver Rose Society

POSSIBLY the greatest problem of rose growers in and around Denver have to face is SAVING THE WOOD. It is time they were considering this all important matter unless they are fortunate enough to have arrived at a way of saving all, or nearly all, of this year's growth for next year's blossom. Not that bush roses bloom on old growth. They positively do not, but the more old growth one can save, the more new growth one can expect and, consequently, the more blooms. The so-called experts tell us that it is not the cold weather in this country that ruins our rose bushes, but the constant freezing and thawing that does the damage.

There are many factors that influence a rose bush entering the winter with a fair prospect of coming through, and the most important is age and health of the bush. The larger and stronger the bush, the larger and stronger it is likely to be after the winter has taken its toll. My roses average over ten years old and, as a result, I lose a lot of them each winter. Possibly old age and not the winter kills a great many of them.

My practice for a good many years has been to hulk each bush as high as I could with the soil I could move up to each one and fill the remaining space with fallen leaves. I spend a week's work in the fall and another in spring removing the trash from the bed. Result—an average lose of five or six of my bushes. The President of the Denver Rose Society tells me that his loss last winter from winter kill was exactly one bush, and I might here let out a secret. He does absolutely nothing in the way of protection, and his bushes look better than mine as a whole. I know of others who never make any attempt to protect their bushes and have wonderful results, and this winter I may be able to persuade myself not to cover any of mine. There have in the past two years been two very radical methods advocated by members of the American Rose Society, both in the far east. One is to cut the bushes back in the fall to the desired height, tie the branches together, and then make a covering out of old window shades, building paper or anything else. I am afraid we may have that will stand the winter. They claim they never lose any more wood than they cut off in the fall. The other plan is to dig up all the bushes in the fall, heel them in in the same bed and replant in the spring. It seems like a lot of work and expense but if there is danger of my bushes freezing, I may try it in the spring having to start from scratch each spring it is worth while.

I was distinctly disappointed with my roses this year. Our main crop was much later than usual and it seems the frost had gone the weather was already beginning to get hot enough to affect the new growth. By that time we should have had three distinct crops of bloom and be getting ready for our last crop. If the killing frost stays away long enough, it is likely we will have one more good crop this year, if not, there is always another year.

My greatest joy this year has been the rose, "Peach." While most of my bushes have been burned up or at least the blooms have been burned, "Peach" has produced a profusion of grand blooms. I often stand in front of my two bushes and wonder how they can be so good.

I have about come to the conclusion that my roses are getting too much sun. About one hundred and thirty of the bushes are in a bed where they get sun from early morning until late at night, and thirty of them are in a place where they only get sun in the morning. While these last thirty bushes are younger, which might account for it, they have produced more flowers this year in the spring removing the trash from the bed. I am going to move as many of these bushes as possible at the first full sun to the bed which only gets part sun. It will be lots of work, but it if produces results it will be worth while.

In my GARDEN

By the Week-end Gardener

The low hills of the Dolgo crab are in the face as I come around the corner of the house. I'll have to cut them back a little, but I have to do it and lose my one of the beautiful red fruit. My neighbors tell me that this tree is as good for jelly as it is to look at. I must try a Dolgo crab tree for an extra effect against the wall. It should make a brilliant show in the fall.

While I am trimming the Crab I am reminded to look at my Elm trees. Yes, there is still evidence of elm scale on them. I ... white objects about a quarter of an inch across. They must be the cottony maple scale which has developed an appetite for the elm. I will have to spray them with tobacco soap before winter comes.

There are quite a few limbs on the Elm trees that are already dead, or almost dead. I believe that I should have trimmed out before the trees are sprayed, so that the spray may do a better job. While they are out, I should examine that the elm is as healthy as possible. I have a lot of leaf-blight and I have to spray them at least three times in a season. Be sure you have your spray tank ready for your spraying.

How about my shrubs? I guess that there isn't much to do to them until next year, but I should be doing it now. We are in the midst of frost, but I should be spraying them the first frost of the year. If you are using a tobacco soap, you may add any kind of vegetable soaps to it, and you will have a good spray which will kill black spot, mildew and all other diseases on the leaves. If you use any kind of insecticide, you must be careful not to mix them, as there is a great many different kinds that will kill one thing and not another.

I feel better now that my trees and shrubs are all fixed for winter.
NO like amount of effort can do so much to improve the beauty and livability of a town as the proper planting and maintenance of shade trees. Trees give relief from the hot sun; furnish framing, screening, background and windbreaks for dwellings. The ordinary life processes of growing trees help to purify and cool the air. With their various flower and leaf and growth habits they add an informal beauty to a community, without which it would be bare and drab. Those used around dwellings may be of a great variety of kinds, and be planted in a great many different ways, but those used as street trees must be carefully selected and planted if they are to give the greatest satisfaction.

Most planting of street trees in the past has been done with no overall plan, consequently the results have been much less effective than might have been. Careful consideration should be given to the ultimate size and character of trees, and to the distance that they are planted apart. To plant trees, which will soon grow very large, close together or along a narrow street, is sure to cause future trouble. From the fact that they are planted along a narrow street, there must be a certain formality in their arrangement. Usually there is a parkway provided in the layout of city streets. In the past this has often been too narrow for shade trees to grow well. This space between the curb and sidewalk should never be under 10 feet wide, and 16 feet would be much better. In residential districts the narrow curb walk is now often used. In this case the street trees can be planted at any chosen distance back from the curb and will have plenty of room for their roots to develop.

For most of the large growing trees, like elm, ash and maple, 50 to 60 feet is a good spacing. Smaller growing trees may be spaced closer, in some 20 to 30 feet. To plant young trees this far apart looks unreasonable at the time, but one has only to look over the older sections of any city to see the reason for this wide spacing. The spacing should have reference to the street as a whole, rather than to individual properties. Fastigiate trees may often be used. It is a good practice to plant several varieties of trees in any community. This eliminates the possibility of epidemics of disease or insects, which attack certain varieties only, leaving the city barren of trees at some time. On the other hand, it is well to plant several blocks of trees of the same kind. This gives the desirable formal effect. It is seldom satisfactory to plant alternate trees of varieties having very different characteristics. The idea of planting temporary trees between the permanent ones sounds good in theory, but seldom works in practice, as the temporary trees are always just in their prime when they should come out, and no one has the nerve to remove them.

A wide street, or one where residences are set far back, may call for spreading street trees, while a narrow street may require a narrow tree. Average size of buildings or type of soil may also influence the kind of tree selected.

Cities which have already planted some trees in a haphazard way, should work out a plan whereby in the next 10 or 20 years all the streets can be replanted according to a carefully worked out design. Existing trees of varieties which are not suitable, or specimens which are in bad condition may be taken out at once and the permanent trees planted. Often a number of existing trees may give the suggestion for completing the planting with more trees of this kind.
"The biggest little house in America" stands at 1300 Rosemary Street, in Denver, surrounded by horticultural grandeur. At least, that's what the residence and grounds have been called by visitors from Texas, California, Montana, New York, Oklahoma and other points east, west, north and south. The property is, actually, better known nationally than locally.

It has also been described as "the most beautiful" in tribute to the trees, shrubbery, wrought iron fences, patterned flower beds (round, crescent, curved—all consistent with the master design) and landscaping. Exterior of the house glistens with white enamel paint, tile roof, flagstone walks and glass bricks. Patios abound, with comfortable outdoor furniture, a fish pond and two barbecue pits.

The residence belongs to W. W. MacGruder, Denver advertising and public relations executive, who heads W. W. MacGruder, Inc. He planned the interior arrangement, lawn, grounds, types of flowers (and where they should be planted) species of trees, landscape contours (there isn't a square corner to be found), hedges.

Mr. MacGruder's "green thumb" started it. He wanted to beautify the property. Improving the lawn meant flowers here and there; also trees and ground-gripping vegetation. Mr. MacGruder planned each step a few days or weeks in advance. As the improvements, and task, became more impressive, he employed a tree specialist, a floral expert and, eventually, workmen to rehabilitate his house. (The five-room home had begun to look a bit forlorn amid such arboreal
WE ARE ASTONISHED!  
PUBLIC DOESN'T KNOW US  
Continued from Page 5  
2600 new members will also speed progress on Altitude Botanical Stations to demonstrate which botanical specimens are best adapted to lower and higher levels. Most important of all will be the improved research facilities to make all phases of CFHA more valuable.

If each CFHA member will bring in one new member, immediate objectives of the Association will be accomplished—and fewer of the public will believe the organization is (1) a branch of government, (2) a patriotic outfit, etc.

IN MY GARDEN  
By the Weekend Gardener.

I'm restless this Saturday afternoon. My lawn will not need mowing any more this year; the leaves are all raked up and put in the compost pit along with the dead annuals and perennial tops; the lawn and garden are soaked ready for the first freeze-up; and the hose is put away down in the basement. I'll just walk around and take another look. Whoops, I just about fell on my face. I'll have to fix that flagstone walk sometime. How about now? Let's look around and see if there aren't other things that need repairing. Sure, the gate has needed a new hinge and latch all summer, and that lattice work surely needs a new coat of paint.

If I am ever going to have that tiny pool and rock ledge, I wonder if now would not be a good time to do it. That steep bank that can't be kept in grass and is always washing out might have a stone wall built to hold it in place, and it would make an interesting change of level.

That third Bolleana poplar is so full of blight that it is hopeless. I might take it out now. But, how would I get it down without breaking the fence and clothes line? Guess I'll have to get a man with ropes, and big saws, and a strong back and some know-how to do it. I can take out that old half-dead Spirea, it's about my capacity.

The flowers in the north bed never did well. Suppose I dig in there and see what the soil looks like underneath. Ah, here we have a batch of plaster from the house, and a few choice tin cans and an old glove. The whole mess looks as if it came from the bottom of the basement. I'll bet that if I took that dirt all out and filled in with good dirt I could raise nice flowers too. But, down about a foot there seems to be better soil, the original surface of the lot, I expect. I don't believe that it is necessary to throw all that soil away. I'll just mix a lot of good fertilizer with it and spade it deep, then see what happens. My neighbor says that he only puts fertilizer on the surface of his garden, but it seems to me that it should be down in the soil where the roots can get to it. I wonder what kind of fertilizer I should use. Most chemical fertilizers are quick-acting but last only a short while. I believe that I should put in some good, old manure or leaf mold and mix it thoroughly with the soil so that it would last a long time and induce the plant roots to go down for their nourishment. That job should take me several weeks.
Fall Bulbs

BY PAUL BRADFORD

With the coming of fall the magazines and garden supply catalogues are alive with dazzling displays of color. They call our attention to the exquisite beauty of a crocus heralding the coming of spring. Spring— with hyacinths, narcissus, grape hyacinths, daffodils and tulips creating a riot of color; each struggling for supremacy.

It is my desire to give you a word of warning. If I can, I want to impress on you a few vital points so when the time comes you will have beautiful blooms that you are proud of instead of small lack-luster flowers that are always a disappointment.

First, buy good, top size bulbs. Many of the local dealers have large assortments of high quality bulbs. These are not to be compared with those selling for as little as a dollar or two per hundred. Good bulbs are the least expensive.

If you are going to plant bulbs of any kind this fall, it is time you prepared the soil for planting. They need a loose well-drained bed. If the soil is very heavy it will need both humus and sand to break it down sufficiently. Fertilizer must be deeper than in other flower beds. Be sure it does not come in direct contact with the bulbs. It will pay you to put from one-half to one inch of sand in every hole.

The most common and serious error made in planting is due to carelessness. Be sure and plant deep enough. Don’t guess, get out your ruler. A little extra depth keeps many little bulblets from forming. In extremely cold areas tulips may be planted as deep as twelve inches and give lovely blooms.

Mass plantings are far more effective than long single rows. It is possible to have blooms for over two months from the plants we are discussing.

Do not hesitate to try some of the newer species. Many of the bicolor narcissus and daffodils are dependable and bring a new thrill from an old favorite.

I wish I could go into detail with the very large tulip family. There are over sixty species and several thousand horticultural forms. All of the wild forms are old world natives. There are three species I wish I could persuade you to try:

1. Kaufmanniana—showy, up to ten inches broad leaves but abruptly tapering. Flowers white or pale yellow with a red marked yellow center. The earliest flowering of all tulips—commonly called the water lily tulip.
2. Hageri—small coppery red with darker base, not over six inches high. Now let me give you the one and only:

Eichleri—large crimson-scarlet flowers with spectacular yellow and black centers, not over twelve inches tall. Words cannot tell you of its rare beauty. A native of southwestern Asia.

These are all for a permanent planting. They should be planted in dry, sun-baked locations. Cultivation has not modified them, they do very well in dry crannies of a rock garden, or along walks or drives that are hard barren areas throughout the summer.

Many garden lovers enjoy a new sense of the beauties of creation when they see the frills of the Parrot Tulip for the first time. They are especially suitable for cut flower arrangements.

You are going to be a heavy loser if you do not have several kinds of lilies nodding in your garden through the summer. Try them with delphiniums.

Four New Books

In the library at Horticulture House there are books new and old. For some of the old books hold a fascination, while others want the very newest book. "All About House Plants" by Montague Free is well named. Mr. Free tells how to select, care for and propagate house plants. The book is beautifully illustrated and should be very helpful to an "indoor gardener".

In "Garden Easily" by H. K. Morse, the author has selected plants for easy gardening with ideas for their arrangement. She writes delightfully, giving many helpful suggestions to the busy person who needs the beauty of a garden.

If one wants humor in a garden book, read Dwight Farnham's, "The Embattled Male in the Garden", with the provocative sub title, "Why Women Are Queer in the Country".

THESE THINGS YOUR ASSOCIATION HAS DONE

Continued from Page 6

"Garden Islands of the Great East" by the plant explorer, David Fairchild, will take one in imagination to the Philippines and Netherlands India in the junk, "Cheng Ho". Mr. Fairchild organized the Office of Plant Introduction in Washington and has spent many years introducing useful plants into America. This is a fascinating book.

"The Embattled Male in the Garden", with the provocative subtitle, "Why Women Are Queer in the Country".

Depth to plant in Colorado.

A. F. Narcissus.
B. C. Grape hyacinth. Snowdrop.
D. Lily.
E. Tulip.

In general, bulbs should be planted deeper in Colorado than is usually recommended in other climates. Lilies may vary according to kind. Tulips may be planted even a foot deep if the soil is not too hard.

With an increased membership much more may be accomplished.
ALMOST in the exact center of the original White River Plateau Timber Reserve, set aside by President Harrison in 1891, lies the Flat Tops Wilderness.

This area embraces 130,000 acres of national forest land, to be preserved in its natural or primitive state, and intended primarily for historical, educational and recreational benefits. Here only the most meager improvements are permitted—hike trails, fundamental camping facilities, and such administrative improvements as are necessary to maintain and protect the area. Commercial timber cutting is prohibited; and while limited grazing is permitted, it is not considered that this use will measurably affect the natural conditions of the area.

Geologically, the area is composed of a large segment of the lava cap which once covered much of this section of Colorado, and overlays many of the recent formations. But apparently the drainage was quite well formed before the ice age which gave this area much of its present character. There are a few peaks—Trappers, Shingle, and Marvine, for example—rising above the general level of the plateau; but, in general, it is characterized by a rolling terrain dotted with potholes and small lakes, marks of the glacial period. Peculiarly, the plateau is drained in the center by the White River, from which it derives its name, on the north and east by the Yampa River, and on the south and east by the Colorado River. Since the lava is very resistant to erosion, in contrast to the sedimentary formations which it covered, high cliffs with talus slopes surround the Flat Tops. Some of these cliffs, like the Chinese Wall, rear up almost perpendicularly a thousand feet. Many segments have been cut off the plateau, forming mesas or buttes such as Flat Top Mountain, the highest point in this section, with an elevation of 12,492 feet, overlooking the Yampa Valley. The Devil’s Causeway is a very narrow neck of the plateau, which now separates the headwaters of the Williams River from those of the Bear River and thus connects a mesa with the main body of the plateau. Since it is only a few feet wide at the narrow point and hundreds of feet down to the base of the talus slopes on both sides, only a (dare) Devil will cross, hence the name.

The cliffs form almost continuous barriers between the plateau and the stream beds or basins. Generally, ascent or descent may be made only over trails which have been located at the most advantageous breaks in the barriers. The basins, with lakes and wall-like cliffs, form the most beautiful part of the scenery. Combined with forests and meadows and viewed either from the basin floor or from the tops of the cliffs, the panorama ends often only at the horizon in a faint blue haze. There are what could be called ten or more major basins of this type included in or adjacent to the Flat Tops Wilderness area, of which the Trappers Lake basin is probably the best known and the most beautiful. Each of these basins is different and has its own attractions.

The elevation of the wilderness area varies from about 9,500 feet on the larger streams to over 12,000 feet. Starting at 10,500 feet on the west end of the area, the plateau itself rises to the east and ends in high points, such as the above-mentioned Flat Top Mountain. Here, the snow accumulates during the long winter, which starts in October and ends in June. The unbroken snow cover at the higher elevations frequently stores over 20 inches of water in its six to ten feet of depth. Melting from May through July, and often lasting even into August, it furnishes water for domestic uses, for irrigation, and for...
Tops is surprisingly luxuriant considering that it is usually June and sometimes July before most of the snow is off the ground, and it may be covered again for the winter early in October. Flowers start blooming immediately after the snow leaves, starting with the large flowered buttercup, which sticks its head up through the edges of the receding snow. The season is so short that one may find what might be considered spring, summer, and fall flowers all blooming at the same time. The more common showy flowers are the white variety of the Colorado columbine, polemonium, blue bell, forget-me-not, alpine aster (sunflower), true asters, phlox, bistort, alpine clover, violets, elephantella, and sickletop, or ramshorn lousewort, under the timber. The lucky one may find Parry’s primrose in a cold rocky spring-fed stream.

The forage plants are predominated by sedges and redtop grasses with alpine timothy a conspicuous component. Mountain bunch, brome, and wheat grasses appear on south exposures and at the lower elevations. Browse species are few—chiefly willow, which forms large patches in wet locations. The Flat Tops being virtual timber line, Engelmann spruce—often called timber-line spruce—is the predominant tree; with alpine fir, lodgepole pine, and Douglas-fir found at the lower elevations of the Wilderness area.

The Flat Tops Plateau, or plateaus, for the most part, are quite open, with large meadows broken with rock ridges and patches and fringes of timber affording excellent horseback riding opportunities. One who is familiar with the area need not follow the marked trails over the plateau, but may follow his inclination and ride in search of vantage points for unusual views from the cliffs or of wildlife in their native haunts. The area usually affords good elk hunting early in the big-game season, but the possibility of having to face a snow storm of major proportions must not be overlooked.

August is the ideal time to visit power development at Hoover Dam. The vegetative cover of the Flat this area. Summer showers are generally past and insect pests few. While July and September are both good and have their advantages, snow drifts may be encountered early in July along with summer showers; and heavy frosts in September, along with the beautiful clear days. All lakes and streams which will support fish have been stocked, and good fishing may be found throughout the area. The water here is very cold, however, and the season short; so, for the most part, feed conditions are not what we might desire and fish development is slow. But—one cannot have everything at the same time.

DON'T go through another summer mowing around shrubs or evergreens which are set out in the middle of things in the path of your mover. Now is the time to make plans for moving them into a position where they will be of more benefit to your foundation planting or screen. These scattered plants not only give a very ragged effect, but cause excessive maintenance.

DON'T allow the globe juniper or Mugho pine that may have been planted under a window or at your front door to grow so tall that it obstructs your entrance or keeps out the light. This difficulty can be avoided by two trimmings during the summer.

DON'T forget to take that snapshot of your garden to help refresh your memory as to the mistakes you made this year. A good thing to do also is to make notes of the flowers that were too tall in the front and those that were too low in the background. Unless you make these records your memory is liable to slip in the spring and you will be repeating the same mistakes.

DON'T forget to trim that espalier tree if you have failed to do it during the summer. A heavy snow can do it a lot of damage, and it is only really effective when it is trimmed in the shape that it was intended.

DON'T forget to drain your pool, for freezing weather is just around the corner. This is also a good time to repair any leaks or cracks.

DON'T let the grass grow in so close to your shrubs that it is difficult to mow or trim. It is usually a good idea to leave a sufficient space in front of shrubs so that annuals and perennials may be planted.
AL COFFIN, GARDENER

By S. R. DeBora

As this issue of the Green Thumb goes to press we learn with regret that Al Coffin died suddenly October 22nd. It is too bad that he could not have seen this little recognition of his many years of garden work. Editor.

A Kansas newspaper actually claimed Al was born in Kansas on February 12, 1874, and as a Lincoln day baby, he grew up there and as "Alpha" was known as one of the speediest pitchers on the "Blue Denim" team. The name refers to the fact that the men of the team were too hard up to buy uniforms and so they wore blue denim pants, homemade.

What saved Al was his move to Colorado in 1896. He became an engineer on the Colorado Midland Railroad and they say the reason there are so many Shakespearean remarks still in existence among the common populace between Colorado Springs and Grand Junction, springs from Al's influence. At any rate, the railroad quit and Al went gardening.

I must now tell you that Al worked on many of Colorado's outstanding gardens. There are the A. C. Foster (now Temple Buell) garden, the Dodos Chapel garden, the Cherry Hills Subdivision, the Al Bromfield and the Donald Bromfield gardens, many gardens in the Seventh Avenue district, the Verner S. Reed garden, the George Brimmer garden in Cheyenne, the state parks in Rawlins, the state parks in Ault, in Meade and in Johnstown. He worked in the Denver Parks and maintained the Washington Park flower gardens, etc.

Out of his work, Al Coffin did not gain riches which may be counted in dollars and cents but he gained some thing else, the friendship and respect of the men he worked with and worked for. His work has given enjoyment to many, many people. How many of us can say this, that we have contributed to the lives of others. I feel greatly honored that I have an opportunity to tell the people of our beautiful state about a man who has contributed to this beauty. I hope and trust that Al may continue to enjoy his retirement, that he may remain for many years the inspiration to the rest of us which he has been all these years.

The garden looks rather rugged, but it may be that a little rash covering the ground will help to protect some of the more tender and shallow rooted plants. My soil is very heavy and bakes like a brick when it is dry. I believe that I will try working a little peat and sand into it and loosen it up. Of course that will not do much good deep down, but even improving the surface will help, I think. I could put a heavy dressing of manure on the garden, but I might get it too thick and burn something. Guess I'll stick to peat and leafmould. The experts say that the purpose of winter mulch is not to keep the plants warm, but to keep them frozen: or rather to prevent rapid thawing. Sounds queer, but they should know. They say to put mulch after the ground is frozen.

I have noticed some plants wrapped up in burlap over winter, and the experts tell me that it is to keep the hot winter sun from drying the moisture out of them rather than to keep them warm. They say that many plants can survive in Canada which do not thrive here, because of our open hot winters. If that is the case I expect that I should not some lath or boughs on the south side of that Linden tree which was planted this spring, as I understand that a Linden has tender bark. A lattice screen to protect my little white pine should be worth the effort. My neighbors do not agree about the proper kind of winter protection for climbing roses, but I believe that I will fasten the boughs from my Christmas tree to the south of them, when I am through with the tree. That can not hurt anything and may break the sun just enough to prevent damage.
HE rose variety Peace, the 1946 All-America rose selection, has won a place in Colorado's rose gardens. It made its first appearance in many flower shows this season and verified all the advance claims for its beauty, elegance and adaptability.

Four hybrid teas and a floribunda — Diamond Jubilee, Nocturne, San Fernando, Taffeta and Pinkie — have been named 1948 All-America selections.

Diamond Jubilee, buff-orange colored, has flowers that grow to five and six inches; they are double and high centered. Buds are slow to open but last well on the bush and when cut. The petals do not fade or burn as they open but rather intensify in color.

Nocturne is Cardinal Red and the plant grows quickly into a big, sturdy bush. The stems are long and the foliage is large, abundant and semi-glossy.

San Fernando is a magnificent, currant red, 30-petaled rose with a very pronounced fragrance. The stems are straight and stiff; the buds are pointed and well formed.

The Taffeta is a changeable flower and displays dozens of color combinations throughout the season. It is described as carmine rose to Begonia Rose, but varies from rose-pink to salmon or apricot. The flower carries a pronounced fragrance and blossoms from perfectly formed buds on long arrangements.

The flowers themselves are a dainty pink and when fully open are about two inches across. Pinkie flowers almost continuously from early spring until late fall. The glossy foliage and the tendency to shed old flower petals cleanly adapts this rose for use as a border or dwarf hedge plant.

Roses selected as All-America have been grown and exhaustively tested for two years in 18 trial gardens located throughout the country. The judges use a scoring system which includes among its points plant vigor, floriferousness, foliage, bud form, fragrance, disease resistance, color, habit, substance, flower form, and length and strength of stems.

This fall the native Aspen disappointed us by not making their usual brilliant show of color. The reason for this was a fungus growth or "Black spot" on their leaves which caused them to drop before they turned yellow. The disease was unusually bad this year because of the wet spring.

IN MY GARDEN

By the Weekend Gardener.

I have found something to do in my garden every weekend this year. Today I have a notion to get out and look around at other people's plants. I wonder what kind of a tree my neighbor has in front of his place. If it were in bloom or even leafy I might know it, but now they all look alike. Or do they? That one has rather smooth, almost silvery bark on the larger limbs. I'll bet it is a Maple—a Soft or Silver Maple—as few other kinds grow in Colorado.

Then the next tree has also rather smooth bark but it is dark brown. The limb habits as I see them against the sky are very irregular. Ah, here's a clue. A long branched thorn. It must be a Honeylocust. The next tree has dark ridged bark and has wide vase-form branching. The whole tree looks black and dirty. It must be an American elm, and the dirty effect is because of scale infestation.

The next tree has a rugged formal appearance, and I notice that the limbs are all opposite each other. Here on the ground are some objects which must be the tree's seeds. They look like tiny canoe paddles. Where have I seen a picture of some seeds like that? I know, it is an Ash.

That tree in the middle of the next lawn has a habit quite the opposite from the Ash tree. The twigs are all very slim and drooping, and the bark of the trunk is white. The white bark must indicate Birch. It is probably the Cutleaf Weeping Birch.

I believe that trees do have distinctive characteristics even in winter when all the leaves are off. I think that I could tell an American Elm, Green Ash, and Maple the next time I see one, and next week I am going to get someone who knows more trees to show me how to tell other kinds when I see them in winter.

THE GREEN THUMB

ALL-AMERICA ROSE SELECTIONS

CHAS. M. DRAGE, Extension Horticulturist, Colorado A & M
Here are some ideas worth thinking about.

Mulching At Malabar

By Louis Bromfield

Concise by Permission from "The Land"

THE question of mulching as opposed to open cultivation has been answered for us. We at Malabar are of the opinion that mulching is for nearly every category of horticulture and agriculture definitely superior to cultivation.

It has long been our practice to use mulch rather than cultivation in the garden given to the growing of small vegetables for the daily consumption and winter use of about thirty-five people. Once the seeds have germinated or the plants are set out, it is our practice to mulch heavily with straw, old hay or even weed clippings or whatever material is available. The results have been universally excellent from many points of view.

The mulching is a great labor saver. Once the mulch is applied only the stoutest weeds find their way through the mulch and these are of such a coarse quality and size that they are easily pulled out (especially since the mulch keeps the soil loose and moist) and with the earth shaken from their roots they are left on top of the mulch to add their contribution of humus and nitrogen when later chipped in or plowed under.

Mulching eliminates all further cultivation, thus saving much time and back-breaking work.

The mulch keeps the soil more loose than if it were cultivated and infinitely more moist than when the deep soil is protected from sun and wind by only the usual dust mulch provided by cultivation. The mulch of organic material also acts as a non-conductor of both sun, heat and wind, and the temperature of the earth beneath is always several degrees cooler than in soil that is cultivated. This condition, together with moisture, promotes the activity of the bacteria in the soil so necessary to proper health and growth, and also keeps alive the earth worms which in hot and dry ground take to lower depths, usually below the reach of most vegetable roots, where the earth is cooler and more moist.

The mulch prevents all erosion and any loss of rain water by run-off. It is an absolute check. We also found that in vegetables subject to blight diseases the blight virtually disappeared. One of the largest commercial vegetable growers in the country, a friend of mine, told me that in his experience there were two reasons for the disappearance of blight:

(a) that the cool, moist, loose condition of the soil in which the plants were growing induced greater health and resistance in the plants themselves; (b) that in a heavy rainfall the drops, falling upon the mulch were absorbed by the mulch without any "splashing" action. When the heavy rain drops fall upon dry cultivated soil, they were shattered in a splashing action which threw the water upward, scattering the spores of the blight from infected ground upward on to the leaves of the plant.

I believe that there is an actual superiority in the use of mulched vegetables over those which are cultivated. This is especially true in our experience with lima beans, cantaloupe, sweet corn and heavily mulched asparagus.

The practice of mulching increases the resistance to most insects. Although scientists have by no means discovered all there is to know regarding the resistance of healthy plants to insect attack, it seems clear to me that healthy plants, grown in moist cool soil, in which the essential elements and trace minerals are present, provide their own insecticides.
Dwarf Japanese Yew—*Taxus cuspidata nana*

Pfizer Chinese Juniper—*Juniperus chinensis pfitzeriana*