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The Green Thumb

Vol. 8 DECEMBER, 1951 No. 12

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THE SEASON'S GREETINGS

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An excellent selection of tagged trees in all sizes—Colorado Pine, Douglas Fir and Grand Fir—in either the natural green, snow flocked or painted.

Beautiful Holiday wreaths for all interior and exterior decorations.

Visit our Christmas Shop and Christmas Tree Lot at 2799 North Speer Blvd. at your convenience.

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DECEMBER SCHEDULE


Dec. 6, 10 a.m. Mrs. Edward Mixa of Boulder will be at Horticulture House to give a repeat performance on Christmas decorations for your home. All who saw Mrs. Mixa’s delightful creations last year are agreed that Christmas wouldn’t be well started without one of her demonstrations. This program is offered in the morning so that more homemakers may attend.

ROCKY MOUNTAIN
HORTICULTURAL
CONFERENCE

The date this time will be a little later than usual; the 25th and 26th of March. The place will be the Civic Center building of Denver University as last year. The program we hope will be better than ever. Mark the date and plan to attend.

The annual dinner of the Association will not be held in connection with the conference as usual, but will be held on January 24th as announced in the next column.

SAVE 50c

As a special inducement for gardeners who would like to have the Green Thumb magazine and also George Kelly’s new garden book, Rocky Mountain Horticulture Is Different, we are offering a year’s membership in the Colorado Forestry and Horticulture Assn., which includes a year’s subscription to the Green Thumb, and a copy of the book for $4.00. This is at a saving to you of 50c.

ANNUAL DINNER

On account of the Rocky Mountain Horticultural Conference being held in March this coming year, the Annual Banquet and Meeting of this Association will be held in January. The date will be the 24th and the place the new Auditorium of the A.A.U.W. at 14th and Josephine. The dinner will be good, the election of directors and necessary reports will be held to a minimum. The year’s work of the Association will be told in ektachrome slides taken by George W. Kelly during the year. These will include some of the most fantastic examples of rock and wood sculpture by Nature that have ever been shown.

Come and enjoy the food, the remarkable pictures, the music and the fellowship of the finest group of people in the state.
LITTLE PLANTS THAT LIKE OUR GARDENS

BY MAUD F. McCORMICK

For edging the perennial border as well as for use in the rock garden, there are many attractive little plants that are not exacting as to their requirements and remain neat and healthy year after year. Recently I have been particularly interested in a few such plants especially adapted to hot, dry conditions in rather poor, sandy soil.

Among such plants, perhaps the Perennial Candytuft, Iberis sempervirens, is best known as a healthy, frequently evergreen spreader with a wealth of white flowers in May. Really a sub-shrub without enemies or diseases to combat, it needs only casual treatment to perform well in the rock garden or as a formal edging for the perennial border. Practically the same statements can be made for the little Woolly Speedwell, Veronica incana, whose dwarf gray mats of foliage rarely become unsightly at any season of the year. Of course, neither it nor the candytuft can always take without flinching such weather as our variable climate sometimes confers upon them. Last winter left browned tips on the leaves of both.

For the hottest and driest locations and in the poorest of sandy soils, I have found nothing to succeed so well as does the Helianthemum, known familiarly as the Rockrose or the Sun-rose. This plant is a more or less evergreen sub-shrub, too. It makes neat mats of foliage which are covered during all the early summer with fairy wild roses of white, pink, or even red. Shearing the plant keeps it in the size and shape the gardener prefers, and, some say, lengthens the blooming season. Letting it grow as it wishes allows it to cover walls and ledges with its pleasing green trailing sprays. It grows readily but not speedily from seed, and green cuttings from choice plants soon root and perpetuate the color desired.

Many other plants come to mind, including the Hardy Alyssum, the Arabis, Aubrietias, neat little Alpine Pinks, and the omnipresent Creeping Phlox. But there is one little plant that has been an ever-increasing joy to me and I do not find as widely used as it should be. It bears considerable resemblance to the wild geranium with small, delicately-lobed leaves and trailing stems, but Geranium lancastrident is a tidier plant. It is a variety of the taller G. sanguineum and gets its name from the part of England where it was first grown. For the past five years I have been watching it develop under a poplar tree in a rather dry, sunny location. It is now a mat 18 inches across and 6½ inches high. Its tiny, delicately-cut leaves are only an inch across and are a lovely, lacy green from spring until fall. For a greater part of the summer the plant is studded with pale pink bloom. Now, in late autumn, the leaves turn to a rich wine-red. The plant is offered by some rock-garden specialists, but I do not find it used as widely as it should be here, where our climatic conditions seem to meet its unqualified approval.

In the wilderness we may enjoy our beauty as it is without effort, but when we have destroyed the balance of nature with our civilized ways, we must work for what beauty we can get.

GROWING IN METAL PLANTERS

BY MARY K. HELLER

Popular, and growing ever more popular, are the attractive plant containers of the various metals—brass, copper, tin and wrought iron. This is not surprising, because they are available in so many different types, shapes and sizes that the grower can find such a planter that is just right for any spot in the home, and the bright and shiny metals or colored painted exteriors can be made to spice up a dull spot in a room.

There has, however, been some difficulty reported by users of such planters due to corrosion of the metal and in some cases the opening of the seams of the square-cornered types. Both are due to the chemical reaction of the metal—the basic metal of the container and the metal sealing in the nutrient elements in the soil, whether organic or inorganic plant food has been used or not. All soil has certain amounts of these chemicals in it—the more nearly “perfect” the soil, the more of these elements are present. But, even if one could start a plant with this so-called perfect soil, he would soon have to use some kind of plant food in order to replace those nutrients used by the plants in the process of growing.

These difficulties can be avoided by the very simple expedient of lining all metal planters with a coat of lacquer or any kind of water-resistant paint. Acid-resisting asphalt paint is excellent for this purpose. A clear lacquer is used by many manufacturers on all such products, and recoating is not necessary if the interior was painted at the time of manufacture. But, being certain that all such containers are painted inside, high enough to come to the top of the soil line, will prevent any corrosion or opening of the seams.

Many such planters have no provision for drainage in the bottom and often growers find it hard to know how much water to give the plants, with the result that they are either too wet or too dry. A good planting plan is to put coarse gravel, or some form of sub-irrigation on a very small scale. Just as the water will become a reserve supply in the gravel, the plant foods which are regularly added will not be lost by being washed out through the bottom, but will be retained in the gravel and gradually taken up by the roots, which will eventually grow down into the gravel. Even if they do, however, root rot will not develop, but all types of plants will thrive and do an excellent job of beautifying the home.

Plan. With the successes and failures of the past season fresh in your mind start now to plan for needed additions and improvements for next season. And put these ideas down on paper so that you will not forget them when spring comes around. Planning in itself is part of the pleasure of gardening. We must have the vision in our mind before we can have it in fact.
YOU CAN GROW ROSES

BY VELL HOOD CONRAD

Let's talk about roses — growing them successfully in the Rocky Mountain Area. Any soil that will grow good vegetables will grow good roses, but they do prefer a heavier soil, and good drainage is essential.

George Kelly has a chapter in his book ROCKY MOUNTAIN HORTICULTURE IS DIFFERENT on "Let's Begin with the Soil". You will gain some timely advice here. It's advice that will enable you to better understand soils and the conditions we garden under here.

Choose a spot with at least a half day of full sun, away from competing roots of trees and shrubs. I like roses in beds alone, spaced, for hybrid teas, at least two feet apart, and beds not deeper than six feet.

There are many classifications of roses and each has its place and purpose. Hybrid teas seem to be the favorite with Floribundas coming into their own. Shrub roses, climbing roses, miniatures — you will want to grow them all.

This past year was truly a challenge to any gardener. November 1950, we had a severe freeze, preceded and followed by mild weather, then a belated, temperamental spring with snow June 1st. This season was comprised of exactly 3 months and twenty days between snows. We had in our locality devastating hail June 9th. Despite it all, we grew roses — beautiful roses.

To those of you starting a new rose garden I would enumerate four basic combination rules:

1. Select stock.
2. Soil preparation and proper planting.
3. Care and maintenance.
4. Winter protection and pruning.

Never sacrifice quality for quantity in selecting rose plants. Fewer good roses are a much better investment. Buy, if possible, field grown roses of No. 1 grade. They should have at least two to three sturdy stems and good roots. They will vary according to the variety. These are usually all pruned and ready for proper planting. Any broken roots should be clipped clean.

I like to get rose beds prepared in the fall. We have sandy soil and at this time it is easier to add the needed elements and spade deeply. Our soil requires humus and peat moss and on a fall prepared bed I use well-rotted cow manure — ratio of about 1 bushel of manure to 10 bushels of soil. This is spaded in with humus and peat to a depth of at least 18 inches. I do not rake it down but leave the furrows to gather winter moisture.

In a spring prepared bed I do not spade in the cow manure. Roses seem to appreciate fertilizer mulches on the ground about them, but they resent it near their roots. That is why bone meal is safest for roses. It does not burn and while it takes longer to get results, I like it best. I still spade deeply, adding humus and peat. Rake and level the bed, then plant the roses. Add 1 bushel of compost, mound them up, and use a manure mulch of 2 parts peat to 1 part well-rotted cow manure.

Plant roses here in the spring as early as March if you can. Roses need a hole large enough to accommodate the root spread, and loose dirt in the bottom of the hole, mound in the center on which to set the roots. Place them so that the bud union will be 1 to 2 inches below the ground level. I push all the loose dirt I can in around the roots, filling the hole about two-thirds full. Then I water with the open end of the hose, slowly, to firm the soil and eliminate air pockets. I move the plant a little to assure its firmness and check to see that the bud union is correctly set.

When planting a bed of roses, I go on to the next rose at this point, following the same procedure. By the time I get back to the first one the wather has drained and I can fill in the hole. This is where I use bonemeal on the spring prepared bed — 1 cup to each plant — mixed with the remaining soil I dug from the hole. I fill it in to ground level and mound up about 6 inches over all with plain soil and apply a manure mulch around and between mounds.

Soon the stems are green and leaf buds swell. Now is the time to gently remove the mound, raking the soil into the manure mulch. On established beds this is the time we prune, weed and cultivate. Also, I dig a shallow trench and each rose about six inches away from the stems and apply 1 cup bonemeal to each plant. Then I water thoroughly. A few days later all this is raked down level again and our peat mulch is added to a depth of about 2 inches.

The roses really start growing now. Get together the materials to care for them. The care and maintenance is no doubt the most important step. Good stock, properly planted eliminates many maintenance problems.

Bugs love roses and weather conditions often encourages mildew and other fungus diseases. We follow a regular weekly program of spraying with Black Leaf 40, and a thorough dusting each ten days with a combination sulfur dust. Black Leaf 40 controls aphids and the dust controls fungus and many other troubles.

We water once a week, but we water thoroughly. Our garden requires very little cultivation. The peat mulch gets the credit for fewer weeds and moist soil retention.

Normally, we have continuous bloom from June until October 1st, with at least 3 periods of solid profusion in bloom. We cut blooms for all purposes and we try to keep all faded blooms cut. To insure more bloom we cut so that there are at least two leaves of five leaflets each left on a stem. We feed another cup per plant of bonemeal in July; add more peat later than August 10. Fall starts a few weeks later and the strength is gained some timely advice here. It's advice that will enable you to better understand soils and the conditions we garden under here.

We keep right on dusting and spraying until Jack Frost hits hard, but we do not water as often. We clean up all rose foliage as it falls and burn it. This is one precaution against spreading black spot. Early snows may damage the canes. We clip these below the break. Our roses are so persistent — so faithful, but in October we are thinking of their winter protection.

Before the ground freezes, we cut only the extra long cane tops back to about 18 inches. We take good garden care of all our friends. We have in our locality devastating hail June 9th. Despite it all, we grew roses — beautiful roses.

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ing. We see a few green canes—a swelling bud or so. We can hardly wait for weather and soil conditions to permit our starting all over again.

It is spring and a busy time, but this is when we prune. Again we remove carefully the mounds of earth. We cut back to live wood leaving four to six strong canes. We cut out all dead wood and scruffy canes. Pruning is very simple in this area.

We have talked about good stock, soil preparation and proper planting, care and maintenance, winter protection and pruning. Those are the basic rules. They may sound complicated—in reality they aren’t. However, I will not tell you roses do not require work and care. They do.

Roses will, of course, flower respond to love. If you are a true rosarian, you love roses. The care you give will be loving care. The return will be always, “lovely roses”.

**YOU CAN GROW STRAWBERRIES**

**BY CLAIR ROBINSON**

Mrs. and Mrs. Hugh Brown, 3215 Fenton St., Lakewood, Colorado are having good success raising strawberries. A great many people are asking for a good sound practical method for their own gardens, so Mrs. Brown kindly gave me permission to make these notes on her culture of strawberries.

The Browns are growing the variety, Minnesota 1166. The 1965 experience told the variety, it gives them plenty of berries to preserve, can, freeze and furnishes berries for use fresh at all times during the growing season. This is an ever-bearing sort with few runners. Plants are compact, upright growing and the fruit is borne upright on stiff stems. This feature keeps the fruit off the ground giving all clean, sound berries.

For the strawberry beds choose a spot in full sun with good drainage. Cover this area with a four inch mixture of cow-manure and peatmoss, half each, then spade soil and fertilizer 16 inches deep in either spring or fall. Make a ridge of the soil one foot high and 24 inches wide, with rows 30 inches apart and plants set 12 inches apart on top of the ridge, firming soil well around the plants, and be sure soil in ridge has been well firmed. If planting in spring, do this as near the first of April as weather will permit. Water by making a dam at each end of trench and with the nozzle removed and force turned down to one-half, fill the trench level full. If no rain falls, do this once each week all summer and fall. Avoid overhead watering. In early fall, more cow manure and peat can be put in the trench, worked into the soil and well watered. Mrs. Brown’s reason for using the peat mixture is the moisture retarding property of peat and it also keeps the straight manure from burning the young plants.

When the bed is established, fertilize heavy once a year using the same mixture either in spring or late fall. Be sure the bed is well watered before freezing weather in late fall. The first of December cover the bed with corn stalks, leaves with a good amount of broken twigs in them or any coarse material that will not pack with the winter snow and rain as grass is apt to do. Mrs. Brown has used the dried vines of petunias with good success. If the winter is dry it is good insurance to water on a warm day. A strawberry bed is good for only three years and by that time you should have a new one coming on in another location. Use only young plants when starting a new bed.

**WATERING AND IRRIGATING**

ARE among the oldest “Helping Hands” to Mother Nature and their use is over 5,000 years old. It has been made necessary to overcome deficient rain or snow fall, and to produce more and better food for human and animal. It also produces surer and more abundant crops, and in doing so gives a better standard of living to many more farmers and gardeners; and last, but not least, it has given us our beautiful cities, towns, parks, cemeteries and home grounds which would, without irrigation, sure be a sorry looking lot.

**WHY AND HOW TO WATER**

Since plants in our Plant Kingdom are not provided with teeth or stomachs, they must obtain all plant food (except what they obtain through the leaves) in a liquid form, including 17 minerals, which have to be liquified by water, erosion, frost, heat, chemically, decomposing, micro-organisms, air, etc.

Feeder roots have very microscopic small openings. By irrigation we force air into the soil, and the deeper we force air and water into the otherwise lifeless subsoil, the more wealth of raw mineral and plant food is made available for plant roots.

Where the water table is high (like in the San Luis Valley, South, Middle and North Parks) deep penetration of irrigation is not necessary; but it is advisable to penetrate to moist subsoil if possible; then deep rooted trees shrubs, alfalfa, etc., will need very little irrigation and not very often. Pre-water deeply before planting anything.

**WHEN TO IRRIGATE OR WATER**

Before planting anything water thoroughly to find high and low places, especially fills and back fills. For trees and shrubs to be planted, fill previously dug holes several times with water before planting. Highway planting done this way would assure sure growth and very little after maintenance.

After lawns are established (if properly pre-watered before planting, assuring deep root system) water lawn only once every 8-10 days, cutting twice a week; leaving clippings on lawn.

Penetrate water 12-24 inches deep; which takes about 2 to 3 inches of water. Of this only ¼ to ½ inch will evaporate; whereas if you water ½ inch daily the penetration will be about 2 inches; and you will lose ¼ inch in 8 hours. In 10 days you will have put 5 inches of water on lawn, hardly ever touching the lower root system.

The moral is to put 3 inches of water deep into soil every 10 days and make plant food available and save time and save the Water Boards valuable water.

Stop sending half of your irrigation water to Kansas and other states per Trade Winds by evaporation; put it in the soil—China has no Pet Cocks to drain the deep water. Withhold watering some in early fall to assure maturing. Water only when plants need water. You can tell when by the color of leaves for they will get darker when dry. If possible, water during winter months as plants very seldom winter kill by freezing, if the sun and drought that kills.

Also, plants store food in winter and develop roots below frost line. Keep the top of the soil wet in winter and dry in spring and summer. Dry soil on top is 30 degrees warmer than wet soil. It takes warmth and sunlight to start life anew, besides it takes soil, minerals, molds, micro-organisms, water and air.

Henry Gestefield.
TIME FOR ACTION

SINCE the reorganization of this Association some 7 years ago we have periodically talked about the importance of preserving the remnants of a unique grove of Pinion Pine trees north of Fort Collins along the Laramie road.

This grove is unique in that it is far beyond the natural range of Pinion trees. It was originally about half a mile wide east and west and about three miles long north and south extending largely on the east side of a hogback formation. This formation is capped in most places with a strata of good limerock varying from two to eight or more feet thick. Scattered trees are growing for miles from this area but the largest trees and densest groves are on this limestone formation.

For some years this limestone has been quarried to be used by the Sugar Companies in their refining processes. There have been roads, a rail spur and loading facilities built to facilitate the handling of this heavy material. The first thing done is to bulldoze off the trees, then blast out the rock and load it. Of course what is left is nothing but desolation with no chance of its ever again growing anything or being more than a jumble of broken rock and unused roads.

The section where the work is now going on is State School land administered by the State Land Board. They receive a large sum per acre foot for this stone which helps greatly to support our schools. This Land Board are, after all, servants of the people and if they feel that enough people prefer this area to be left: as a unique botanical reserve and state park rather than have it as a source of income they will so designate it.

Since about two thirds of this section from the south has had some work done on it we are recommend ing that the State Land Board designate a line at the farthest north workings and indicate that no work will be done north of this line. This will allow the quarrying people to clean up all available stone up to this point and make full use of their existing installations. This might take them 10-20 years. Then there would be left an area approximately a half mile square where some of the best specimens are located which could be added to by private lands adjoining and leave a presentable sample of the original grove.

We must see that the bill establishing a state park system in Colorado is put through the next legislature so that there will be a suitable agency created to administer this as a state park along with many other such unique areas over the state.

Residents of the vicinity have finally become concerned about the loss of this grove and are taking an active part in calling everyone’s attention to its importance. The Livermore Women’s Club and various groups of Fort Collins are helping to give the situation general publicity.

If you feel that this grove should be preserved you should tell your public officials about it.

TREES AND SAFETY

BY GEORGE S. STADLER

OURS is a constantly changing way of life effecting countless hazards proportionate to modern conditions. Regulation, capacity for realization and a humane consideration of one another, serves constantly as protection from the ever present dangers to human life and property.

Roots required for substance and support of a tree can effect damage to surface walks, pavement, curbs and walls, as well as to essential underground pipeline and conduit facilities. Weak, poor, ineffectual root systems damaged by either man or natural action result in poorly supported tree growth subject to wind throw.

Tree trunks necessary to support of the crown and conduction of nutrient material will continue to expand in size until maturity or death causes growth to discontinue. Trunk structures on large trees along streets can render visibility obstructions to both traffic and pedestrians. Damage or wounds neglected on this portion of a tree can allow entrance of rot fungi which may weaken it to the extent of causing it to crash under stress of storm or wind.

Then too, the crown of the tree, necessary for manufacturing of food and growth materials, transpiration and evaporation processes, is a constant source of danger potential if neglected, allowing dead, weak, or out of proportion growth to develop in jeopardy of human life and property.

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Then too, the crown of the tree, necessary for manufacturing of food and growth materials, transpiration and evaporation processes, is a constant source of danger potential if neglected, allowing dead, weak, or out of proportion growth to develop in jeopardy of human life and property. Limbs interfering with electrical power lines will cause short circuits dangerous to human life and adjacent property.

Common sense safety precautions applied in planting the right type of tree in the right place, and maintaining it over the years in a proper manner, will serve to overcome the danger factors of tree growth to human existence within heavily populated areas.
NEW HARDY EVERGREENS FOR COLORADO

By Robert E. More

A ccurately speaking there are few 'hardy' evergreens that are "new" in Colorado. Inquisitive, pioneer nurserymen like George Kelly, Scott and Charlie Wilmore, Maurice Marshall, Robert Forrest, John Roberts, Bill Lucking and many others—between them tried about everything that could possibly succeed here. My only contribution has been to try more of a kind for a longer time, under more diverse conditions than perhaps the others did. It takes so long to be sure, that the list of new, hardy evergreens is still rather short. I believe, however, that the following, not all of which are as yet carried regularly as routine stock, are all pretty certain to stand up under conditions even as severe as November 10, 1950, when the thermometer dropped from 60° above to 8° below in 48 hours and, of course, before very many of our woody plants had "seasoned."

LARGE EVERGREENS (above 30 feet).

*Pinus contorta*—Shore Pine. Very picturesque tree with twisting trunk; the Pacific Coast cousin of our Lodgepole Pine.
*Pinus flexilis* Glenmore—Glenmore Limber Pine. A selected native with longer and more silvery needles.
*Abies lasiocarpa arizonica*—Corkbark Fir. As blue as a Meechim Spruce and as soft as a White Pine.

MEDIUM EVERGREENS—(15 to 30 feet).

*Pinus cembra*—Swiss Stone Pine. Symmetrical as a trimmed juniper. Not to be placed in southern or western exposures.
*Pinus sylvestris* Pyramidal—Pyramidal Scotch Pine. A narrow column for all year accent.

*Juniperus scopulorum* Gray Gleam—Gray Gleam Rocky Mountain Juniper. Scott Wilmore's patented tree. The finest juniper of all. (But don't get any juniper unless you are willing to have it sprayed twice a year.)

LOW EVERGREENS (2 to 6 feet).

*Juniperus chinesis* Blue Pfitzer—Blue Pfitzer Juniper. Fast growing, handsome, a novelty.

*Juniperus scopulorum* Table Top—Table Top Rocky Mountain Juniper. A spreading native of fine color. (The varieties "Park" and "Communis Type" are equally as good.)

*Picea glauca* Albertiana Dwarf—Dwarf Alberta Spruce. A gem to be planted in a northern exposure only.

*Taxus cuspidata* nana—Dwarf Japanese Yew. Plant in all year shade and feed each spring.

CREEPING EVERGREENS (Under 2 feet).

*Juniperus horizontalis* Glenmore—Glenmore Creeping Juniper. The hardiest and slowest growing of all. A selected type with berries of Wyoming Creeping Juniper.


*Juniperus sabina* Russian No. 4—Russian Savin Juniper No. 4. An offering of D. Hill Nursery that "has everything."

*Juniperus procumbens* nana—Dwarf Japparden Juniper. Another Hill product. Try it.

HOliday seasons bring holiday flowers, and Christmas brings that bright and cheery favorite, the poinsettia. A native of moist, shaded parts of tropical Mexico and Central America where it grows as a shrub 2-10' high, the beautiful poinsettia (Euphorbia pulcherrima) is known to us only as a tender pot plant. We love it for its bright red "flowers", which are really not flowers at all but are brilliantly colored modified leaves known as bracts. The true flowers are the inconspicuous clusters of yellow in the center of the bracts, which are often thought of as the center of the "red flower" rather than as flowers themselves. In recent years poinsettias with white or yellow bracts have become popular, but at Christmas time the red poinsettia is the old favorite.

When the poinsettia arrives to brighten your holidays, put it in a sunny location away from drafts, keep it uniformly moist, and allow no sudden changes in temperature. These precautions should give you a maximum period of pleasure from your plant. Sooner or later, however, the leaves will drop. Then, if you wish to keep the plant for another year, relegate it to a cool, dark basement and keep it dry. About May cut the plant back severely, repot in a fairly light soil containing a good proportion of leaf mold or peat and sand, and sink the pot in a sunny part of your garden when danger of frost is past. During the summer the poinsettia requires no special care except to be kept moist. In August, again prune severely. Bring the poinsettia indoors before frost, place in a sunny location, keep moist and at a uniform temperature, and feed about once a month with liquid manure or commercial fertilizers. Your chances for Christmas bloom from these plants are good, if you are willing to take the trouble to maintain the plant the rest of the year. If you lack the facilities for caring for the dormant plant and starting it on its new growth in summer, why not consider the poinsettia as a temporary thing and enjoy its beauty while it lasts, as you would cut flowers?

WHAAt I LEARndeD THIS YEAR

Was a plenty because there were many, many things for me to learn and there will be many, many things for me to learn in the years to come. But, working at the Horticulture House with the Herbarium group one can help but be connected with the learning. One of the things I learned was—a dandelion is not a dandelion in the mountains, it is a Taraxacum,—imagine that,—and all my life I have been calling that little yellow pest a dandelion, (and of course a lot of other things not printable). I also learned of the great family called the composite group. I love to hike and fish and what a joy it is to recognize as old friends such plants as the Gentian, the delicate Twin Flower, lovely pink Calypso Orchids, Yellow Arnica, tall airy Meadow Rue and many others.

Yes, I feel I have accomplished a good deal this last year toward learning the wild flowers and look forward to making new friends in the wild flower world while again working this winter with the wonderful Herbarium group at the Horticulture House.

ELIZABETH BAHM.
COLORADO'S BLUE STAR HIGHWAYS

Have you noticed the signs along highway 40 for several years, and lately along highway 85-87? And have you noticed the attractive fireplaces made of Lyons Flagstone and the picnic tables and trash cans? These are all the result of the work of the Colorado Federation of Garden Clubs as carried out by the Blue Star chairman, Mrs. Frank Neal of Lafayette.

This is a worthwhile movement to create a listing and beautiful memorial to the boys who died in service and it has also helped to maintain a little interest in the improvement of the appearance and comfort of our highways.

The picture shows one of the newest and best additions to the statewide system of highway turnoffs which is now being used near Lafayette. As usual much of the actual work has been done by Frank and Ruby Neal.

At a recent annual meeting of the Blue Star committee in the office of the State Highway Engineer the movement was started to promote the establishing of suitable roadside parks along all Colorado’s highways. Roads that run through the National Forests and National Parks are adequately furnished with very efficient picnic and camping facilities, but there are hundreds of miles of roads, especially in the east third of the state where there are no facilities whatever to get off the road to rest, picnic or camp. This is our “front door” for the thousands of tourists that we invite to our state and we should surely put out the welcome mat for them by providing suitable roadside parks.

The approved system provides a turnout where there is parking space, good drinking water, toilet facilities, shade, picnic tables, trash cans and fireplaces, spaced at about every 50 miles and often picnic tables and trash cans under a tree at intervals of 10 miles, on well traveled roads.

There has been some difficulty in determining just where the funds would come from for purchase, construction and maintenance of such parks, but other states have worked this out and we can too.

THE ROCKY MOUNTAIN COLUMBINE—OUR STATE FLOWER

By Henry Gesfield

WHERE are they? What became of them? Have they vanished like the Buffalo? Should Colorado designate another flower as our State Flower, like the Wild Rose, Cactus, Soap Weed, Dandelion, or Sweet Clover? Or maybe our famous greenhouse product, the Carnation?

Some old timers remember the Rocky Mountain Columbine growing in Grandmother’s old-fashioned perennial flower garden, and along dirt roads in the mountains. But now—where art thou? Only hardy mountain climbers get a view of the most inspiring sight below rock slides, near mountain trails at high elevations. Here we see our lovely Columbine—heavenly blue for our Colorado sky and pure white for clean and pure mountain air.

Thousands of our children have heard about our State Flower but have never seen them. Millions of out-of-state tourists look in vain for a sign of the Rocky Mountain Columbine. We could put up signs on highways and by-ways reading, “See the Colorado State Flower; follow trail uphill one-quarter mile through underbrush and fallen timber to rock slide.” There they are!

Or we may do as follows, similar to “Johnnie Grass Seed” move: Create a “Native Columbine Planting” program to be sponsored by Garden Clubs, Civic Clubs, Women’s Clubs, 4-H Clubs, Schools, State Highway Dept., U. S. Forest Service, Boy and Girl Scouts, Izaak Walton League, Colorado Forestry and Horticulture Association, and others.

Program No. 1: Members of the above Clubs save, gather, or buy Rocky Mountain Columbine seed and plant same along trails, roadsides and highways all over the state. Pre-water the area to be planted with a pail or two of water. Plant five to ten seeds about a foot apart, cover and seeds about one inch, give one more light watering and cover area with a two inch layer of loose mulch. Good old Mother Nature will do the rest. Planting time is any time you can plant seed in properly prepared soil. Nearly any type of soil that can be pre-watered will do, but it must be covered.

Program No. 2: Raise plants in home gardens; when plants are two years old, transplant seedlings to your favorite roadside. Best transplanting time is in autumn between the first and second snowstorms. Pre-water, don’t cramp roots and mulch area around plants. Everything will be all right, providing pesky two legged destroyers leave plants alone.

The reason our native Columbine does not reproduce readily is because seeds must be covered by animal feet or man’s hand to germinate. Also many birds and rodents eat the seeds as soon as they are dropped. Unless the seeds are gathered by authorized personnel, the greatest part of the seed is a loss.

Most anyone can spare fifty cents to buy a package of seed. Will you?

Lin Yutang says, “It is more important what one looks out on from the house than what one sees in it.”

Good gardens begin with orders to nurseriesmen that go for the very best stock.

H. F.
The sale and regulation of Christmas trees in Colorado is under the jurisdiction of two agencies: United States Forest Service and the Colorado State Board of Forestry.

Trees on federal lands are sold on open bid by the U.S. Forest Service rangers. Trees are cut according to U.S. Forest Service regulations and are tagged with red Forest Service tags.

For many years the State Board of Forestry, through the State Forester, has carried on an educational program for the control of Christmas tree cutting on non-federal lands. Although there are no strict state laws controlling the cutting of Christmas trees and boughs in Colorado, this educational program has gained momentum in the past few years and has merited the cooperation and confidence of the majority of Christmas tree cutters and dealers. When this educational program has been followed, the cutter and/or dealer are issued Christmas tree tags which prove to the public that the trees were cut under conditions promoting good forestry.

When a landowner, cutter, retailer, or wholesaler wishes to cut Christmas trees for future sale, he can make application by mail or telephone to the State Forester, Room 124 Capitol Building, Denver. The application should show the land description and exactly how the cutting area may be reached from Denver. Representatives of the State Forester will make an immediate inspection of the cutting area. This inspection will determine if the cutting will be detrimental to the land, if thinning is necessary, and which trees should be marketed. Following this inspection, a permit will be issued showing the number of trees to be cut, the landowner’s name, and the land description. The cutting can then proceed according to forestry practices outlined by the State Forester.

After the cutting has been made, the cutter will again contact the State Forester. Another inspection will be made of the cutting area. If all cutting has been done properly, Christmas tree tags will be issued for each tree at 2c per tag. Tags will be immediately attached to the trees. The trees may then be removed from the cutting area.

Anyone wishing to sell out-of-state Christmas trees should furnish the State Forester with a bill of sale (or some other evidence) showing the exact number of trees being shipped into the state. The State Forester will issue out-of-state tags (also at 2c per tag) for each tree. This tag will clearly show that the tree was not grown in Colorado. Colorado assumes that cutting inspections were made in the other state prior to shipment to Colorado.

Generally speaking, good cooperation has been given the State Forester in his attempt to regulate Christmas tree cutting in order to assure the protection of our watersheds and forests. Each year more people demand that the Christmas tree they purchase bear a tag showing that the tree was cut according to good forestry and conservation practices. However, there is a definite need for a strict state law which will control Christmas tree and bough cutting all over the state. Every attempt will again be made this year to have such a law enacted by the state legislature.

In order to strengthen the State Forester’s educational program and assure proper protection for city watersheds, most of the large cities in Colorado have enacted ordinances which specifically limit the sale of Christmas trees within the city limits to those trees which bear State Board of Forestry or United States Forest Service tags.

Creating Your Garden the Modern Way

Adapted from “Designs for Outdoor Living,” by Margaret Oltot Goldsmith, “Landscape for Living” by Garrett Eckbo.

In order to make the backyard livable we must first think of it as a six-sided cube of three dimensions, taking in the airspace above the ground.

We begin by partitioning the area for requirements of use, location, and exposure to take advantage of view, slope of land, sunlight, and shade. The partitions may be solid masonry walls, transparent glass, hedges, curtains, or merely the loose suggestion of partitions by a row of trees or posts. These may range in height from the lowest ground cover to the tallest tree.

By interrupting but not blocking the vision of the observer we develop the ‘interspatial vista’, appreciated from any point in the garden.

All of this is not enough. The garden must be more than an outdoor living room. It must do things to its possessor—amuse him, stimulate him, delight him, relax him. It must provide him with that revitalizing contact with the growth of plants and the fecundity of the earth, without which man loses his strength and his inspiration. Every visit to it must be an adventure and an experience. Gardens must be the homes of delight, of gayety, of fantasy, of imagination, of adventure, as well as of relaxation and repose.

Good modern style in house or garden means avoiding copying some era in the past in externals. It means adhering in house and grounds, in plan and materials, to what your own manner of living and your site demand.

Modern homes relate house and garden, suit both to taste and habits of the owner, fit them skillfully to the contours of the ground, create balance without symmetry. A modern garden pays as much attention to proper enclosure (fences) and to both overhead and underfoot structures (platforms, pergolas, pavement and walks) as to well-placed flowers and ‘flowering’ shrubs.

“The true test of skill is in the arrangement.” A rear garden has a need for greenery, a place to sit or stroll, play space (recreation) and sometimes for utilitarian features, such as clotheslines and ashpit or incinerator. The small-garden secret is that by giving your eye and mind something to follow through the area, both at ground level and in the upper spaces reached by vines and tree branches, you feel the distance is greater from end to end or across than if you take it all in at a glance.

Gleaned by
M. Walter Pesman.
GOOD FRUIT FOR EASTERN COLORADO

By Herbert Gundell

A fruit tree, can provide much beauty, joy and utility to the home gardener. It provides not only fruit, but sometimes also shelter for birds, shade and enhancing beauty. There is grace in the lines of a well cared for fruit tree, even in the winter months when little life can be detected out-of-doors. In spring the fruit tree gives us some of the early colors we so long to see, the beautiful white and pink shades of the blossoms. In the fall we enjoy its delicious fruit with rich yellow, gold, red, blue and green coloration. Even a few fruit trees can provide an often necessary background to a beautiful and enjoyable garden. That is why the selection of fruit trees should perhaps be as careful as that of a mahogany dining room set or some exquisite silverware. Home gardens in the city often are limited in space. The selection of the fruit tree, therefore, is of great importance. In many cases, available space provides room for only one or perhaps two trees; in which case, the writer would suggest the selection of either an apple or a sour cherry, or both.

A Montmorency sour cherry is probably one of the most successful fruit trees in this area. It will withstand a good deal more sub-zero temperature than most other fruit trees. It is also quite drought-resistant and of a semi-dwarfed growth habit. It blends very successfully with the architectural lines in the 1950's.

If there is sufficient space for one large tree or perhaps a smaller and a larger tree, a good apple variety is always a rewarding selection. Many good apples can be determined by their general popularity throughout this area and the United States. The selection of an apple will have to depend therefore pretty much on the personal preference of the home gardener. To mention a few popular varieties most people will select: Red Delicious, Winesap, Jonathan, Golden Delicious, Northwestern Greening, and Rome Beauty. A description of these varieties will follow immediately.

Red Delicious: Very resistant to fireblight (a bacterial disease), a good pollinizer, but self-fruitful. A self-fruitful apple tree requires a pollenizer tree within the same garden or immediate neighborhood. Bear at 5 to 8 years of age.

Winesap: Very resistant to fireblight, but a poor pollenizer and self-fruitful. A Winesap therefore will not pollinize a Red Delicious. Bear at 6 to 8 years of age.

Jonathan: Very susceptible to fireblight, slightly self-fruitful and a good pollenizer, subject to winter injury as young tree. Bears at 4 to 6 years of age.

Golden Delicious: Very susceptible to fireblight; self-fruitful but a good pollenizer; subject to winter injury as young tree. Bears at 4 to 6 years of age.

Northwestern Greening: Susceptible to fireblight, self-fruitful, and a poor pollenizer, but very winter hardy. Bears at 5 to 8 years of age.

Rome Beauty: Susceptible to fireblight, a good pollenizer, but only slightly self-fruitful. It matures late in the season. Bears at 4 to 6 years of age.

Many other less popular apple varieties deserve mention because of their hardness, such as Red June, Dutches, Red Sheriff, Cortland, and Haralson.

Where garden space is abundant the use of an early-bearing and early-maturing apple variety is often desirable. Yellow Transparent is perhaps the most popular early apple, but rather by nature of its earliness than by virtue of any other quality. It is very susceptible to fireblight injury, but a good pollenizer and partially self-fruitful. Early McIntosh, a hybrid between Yellow Transparent and McIntosh, may eventually replace Yellow Transparent because of its fruit resembling a McIntosh and stores better.

Another fruit tree of great merit is a good plum. It provides a good crop of fruit practically every year and lends itself not only for table use but also for canning and the preparation of jams and jellies. A few plum varieties that have proven popular are: Blue Badge, Ontario, and Dutch Blue.

Another aspect of fruit growing is to pollinize apple and plum trees present in the garden. There are many fruits that require pollinization. All are not seasonal though. Although a few fruits require cross-pollination and hence, the presence of more than one tree of the same species in the garden is requisite. A few of these fruits that are pollinized interchangeably are: crab apples, peach, pear, apple, and plums. A good pollinizer is necessary for a successful crop of apples and peaches. This is especially true of the apples in our area because they are quite susceptible to fireblight.

Apricots bloom very early and rarely escape frost injury. Few crops can be expected in an apricot's lifetime. It is therefore unwise to recommend them.

Sweet Cherries are also very tender and suffer from too many failures for honest recommendation. In addition most sweet cherry varieties are self-sterile and inter-sterile and require special pollinator trees, a matter too complicated for home fruit gardening.

Anyone may plant any type of tree that they desire. From a standpoint of satisfaction over a long period of years, the home gardener who stays with sour cherries, apples and plums may expect much delicious enjoyment from his fruit garden.
THE WAR OF MAN VS. BEETLE
In the Engelmann Spruce Forests of Colorado

By Don Bloch

UNLESS a reversal of present infestation trends occurs, 1951 is seen by the Forest Service as the year in which the tide has turned in the 10-year old Engelmann spruce beetle epidemic. Since 1942, when the epidemic was first discovered, 4.3 billion board feet of timber have been killed by the invading insects. The purpose of the continuing program is to save the 15.5 billion board feet still green and growing in the path of the beetle.

In two summer set-tos with the insects, a total of 983,000 attacked trees have been treated—784,000 of these in the 1950 season, the remainder this year. Over a million gallons of insecticide were sprayed in the 52,000 man days of labor expended in last year's program; about 377,400 gallons in the 15,800 man days of labor in 1951.

Original surveys by the Bureau of Entomology and Plant Quarantine, during the summer of 1950, indicated that about 1 1/2 million trees needed treating this year to halt the epidemic. Natural forces combined that winter, however, to permit a lowering of sights on this objective: an extended deep freeze caused heavy insect mortality above snowline; and woodpeckers in unusual numbers were also good allies against the beetles. These factors, together with the treating program of 1950, brought the total down to 400,000 trees that needed treatment—a greatly reduced program, but one entomologically sound.

A late start—due to delayed appropriations—together with labor and climatic handicaps, forced stoppage of the project about halfway of its goal. In spite of disappointments, however, the control program of '51 was, in the words of its director, C. T. Brown, "a good boost in the direction of next year's program."

The 1952 campaign, for which an appropriation of $1,800,000 is being recommended, higher wages, other increased costs, and the scattering nature of much of the infestation indicates a probable treating cost of about $4.50 per tree—calls for the treatment of 400,000 trees—175,000 1950-52 attacked, and 225,000 1951 attacked. This figure represents an approximate 87 per cent reduction in the 1950 survey figures of 1,500,000 1950 attacks, principally as a result of last year's control work coupled with the 1950 freeze and with increased woodpecker work. These trees are located in 18 separate areas of infestation in the regions nearby Eagle and Kremmling, Colorado. Thirteen camps are located—six near Eagle, the rest near Kremmling—which will be manned by a total force of 470 men. Equipment is already on hand for these camps, including that for four mobile 10 and 25-man camps, a 1952 innovation that will make for flexibility and utility of operation.

NEW MEMBERS

October-November, 1951

Mr. A. Specht, 4065 Field Drive, Wheatridge
Mrs. E. S. Eaton, Rollinsville, Colorado
Mr. and Mrs. F. F. Floyd, 2010 So. Madison
Lucille Massaro, 3840 Harlan, Wheatridge
Mr. B. E. Whitten, 806 So. 6th, Lamar
Mr. Richard R. Osborn, 3316 Niagra
Mr. David J. Sites, 814 So. Josephine
Mr. A. F. Johnson, 641 Columbine
Mrs. George Westerman, 5451 So. Broadway
Mrs. Antonio Iacobucci, Box 6298, Fitzsimons Army Hospital

Mr. Richard M. Fletcher, 87 West Cedar Ave.
Dean and Mrs. Paul Roberts, 1025 Humboldt
Mr. Fred G. Walker, 3015 Garfield
Mrs. John B. Grow, 2530 Colorado Blvd.
Mr. Ronald R. Ament, 3001 Jackson
Mr. and Mrs. E. J. Howard, 3040 Garfield
Mr. Arnold Feldman, 740 Jasmine
Mr. Jim Hutto, 1929 Emerson
Mr. Jerry Pekar, 6150 Wadsworth, Arvada
The L & H Garage, Wheatridge
Mr. and Mrs. F. J. Howard, 3040 Garfield
Mr. Eugene Cervi, Publisher, 1420 Stout Street
Mr. and Mrs. Oliver J. Barr, III, 7001 W. 15th Ave., Arvada
Mr. Chuck Brouse, 1015 E. 41st Ave., Denver 10
Mr. Larry Hines, 910 S. Snow Creek Rd., Thornton
Mr. and Mrs. J. W. Donaldson, Capital Landscape Service, 2424 E. 1st Ave., Denver
Mr. Henry Pedersen, 591 So. Downing
Mrs. Ralph N. D. Atkinson, 1938 So. Colón
Mr. John T. Eastlick, 2660 So. Linley Ct.
Mrs. Katherine J. Denny, 2596 Fillmore
Mr. and Mrs. A. S. Grimsley, 4025 Field Drive, Wheatridge
Mrs. Charles A. Bonfils, 551 High
Mrs. D. W. Darwin, 360 Gilpin
Mr. A. M. Olson, 202 So. Emerson
Mrs. H. D. Harris, Box 105, R.F.D. No. 2, Collins
H. A. Powers, 2901 So. Sherman, Englewood
Mrs. Henry J. Pugh, 8600 W. 10th Ave., Lakewood
Mr. Frank Tiller, Tiller's Arvada Mills, 5180 Wadsworth, Arvada
Mrs. Anthony D. Donat, 4490 Allison, Wheatridge
Mr. Frank Byrne, 131 So. Clermont
Mr. C. E. Eddebleute, 2943 St. Paul
Mrs. James Lautzenherz, 702 So. Main, Laramie
Mrs. Albert J. Gould, 844 Humboldt
Mabel E. Miller, 700 Washington
John F. Blanchard, 906 5th Ave., Longmont
Mrs. O. H. Brewer, 725 So. Shields, Ft. Collins

Mr. Shig Hashii, 2710 Curtis Ave.
Mr. Paul E. Tiflford, Box 26, Wooster, Ohio
Mrs. Frank Hren, 1940 Acero Ave., Pueblo
Orace Campbell, 928 Harrison
I. M. Anderson, 829 Lafayette
Mr. Eugene Cervi, Publisher, 1420 Stout Street
Mrs. G. E. Dorsett, 2862 Champa
Mrs. Gunnar Johnson, 2018 Fifth St., Greeley
Mrs. Mason K. Knuckles, 340 Lafayette
Mrs. John J. Jones, Box 266, Rt. 2, Arvada
Mrs. N. A. Kitchell, 105 E. 4th Ave., Denver
Mrs. E. M. Clinton, 1479 Dexter
Mrs. J. P. Moroney, 711 Loyden
Mr. and Mrs. William C. Erickson, 4335 Newland, Wheatridge
Mrs. Melvin J. Sowle, 155 High
Mrs. H. V. Lemley, 1708 Rainbow Ave., Laramie, Wyo.
Mrs. S. W. Neil, Box 1467, Rapid City, So. Dak.
Mr. Edwin R. Warner, Box 78, Mead
Mr. Don O. Clair, 1424 E. Stanford, Englewood
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Mrs. Elsie Bacher, 4701 Wadsworth, Wheatridge
Mrs. Harry F. Brouse, 4166 Raleigh
Mr. G. W. Miller, 276 So. 6th Ave., Brighton
Mrs. Charles S. Hill, 5310 E. 17th Ave., Elizabeth Maschel, 505 So. Cedar, Yuma

Season's Greetings

To Our Friends and Customers

NEWMAN GARDENS
LEAF DROP OF EVERGREENS

Reprinted from Shade Tree Digest

The word “Evergreens” is a descriptive term generally used in speaking of such trees as Pines, Spruces, Cedars, Firs and Junipers. It is a misnomer if we think of it as applied to the individual leaves or needles of these trees. For evergreens, like broad-leaved trees, shed their foliage. In contrast with the broad-leaved species, however, evergreens seldom shed all of their leaves at once. The shedding process is gradual, and therefore less noticeable, but one needs only to walk through a pine or spruce forest and observe the dead needles covering the ground to realize that leaf-fall is a normal occurrence among evergreens.

The individual leaf or needle remains attached to the tree for a rather definite period of time, which varies with the species. For example, on Arborvitae the needles usually persist two years, on white pine, two or three years; on jack pine, four to six years or occasionally longer; and on spruce, seven to ten years. New foliage develops each spring, however, which keeps the tree “ever-green”. This new foliage is lighter in color than the older needles, but darkens as summer advances. Usually, the greatest amount of foliage-browning and needle fall occurs in the late summer or early autumn. Leaf fall in greater abundance can be expected after a dry summer than when normal rainfall occurs.

Evergreens, of course, are subject to insect pests, diseases, and injuries of various kinds, any of which may cause abnormal leaf fall. If autumn browning of needles and subsequent defoliation appears to be excessive, the wise homeowner will promptly consult his arborist.
NEW SERVICE FOR WOODLAND OWNERS
By Dave Minister
State Service Forester

In January, 1951 the first Colorado State Service Forester was employed by the Colorado State Board of Forestry in cooperation with the United States Forest Service.

Private woodland owners are given technical assistance on their woodland management problems by a college-trained forester. This assistance includes advice on harvesting timber, thinning and pruning timber, insect and disease control, and marketing and processing timber.

There is no charge to the woodland owner for these services. The cost is carried jointly by the State and Federal governments. However, in the event these problems are extensive in nature, the owner is referred to a private consulting forester so that there will be no competition between the Service Forester and consulting foresters in private business.

The Service Forester is a state employee within the office of the State Forester. Since this service was established, the Service Forester has been stationed in the Black Forest—eighteen miles north east of Colorado Springs. Although the services of this forester are available throughout the state, work has been concentrated in this 120,000-acre, forested area because it is predominately privately owned. Also, it is a vital watershed influencing both Denver and Colorado Springs. A great deal has been accomplished in this area because both landowners and sawmill operators have seen the necessity of adopting improved cutting practices and a system of slash disposal to lessen the post-logging fire hazard. Since this service was inaugurated, several thousand acres of vital timber and water-shed lands have benefited through improved timber management practices.

It is the hope of the State Board of Forestry that more people in the state will take advantage of this new service. Anyone interested may obtain further information from Mr. Everett J. Lee, State Forester, Room 124 Capitol Building, Denver.

Perhaps many of you woodland owners have been looking for assistance of this nature.

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THE GREEN THUMB

THAT SHADY SPOT
By Gertrude Ballinger

HAVE you an area around a tree that would provide high shade and where the ground may be cultivated? If so, you have the location that may be a bouquet of color from very early spring until fall frosts.

For earliest bloom, daffodils planted ten to twelve inches deep with good drainage provided, and tulips planted at least eight to ten inches deep, also well drained, will give you a parade of color lasting until the tree has leafed out.

Then comes the summer display. Plant tuberous begonias between the maturing foliage of the tulips and daffodils in early June. They will quickly hide the old foliage and begin rewarding you with such perfection of form and color of bloom as seems so beautiful to know.

Since the begonias are shallow rooted, a rich top dressing of well rotted manure with some peat moss mixed in to hold moisture, and a fine spray of water applied two or three times daily will assure an abundance of beautiful flowers throughout the remainder of the summer. If there is a prevailing wind through that area, provide a windbreak of plant material or erect a low ornamental picket fence as a border and an added protection against stray dogs running through the tender plants.

Careful planning, careful planting, good soil and frequent spraying of the begonia foliage will pay big dividends. In the fall, after the foliage has been killed by frost, dig the bulbs, cure them for two or three days in the sunshine (covering them on the ground at night), then dry them thoroughly in the basement. Remove the dirt and store them in clean dry peat moss in a cool place until time to replant them in a warm, sunny room in April. By June, the plants should be starting to bloom, so when they are transplanted to the outdoor bed the color display is ready to start again.

YOU ARE NOT FAMILIAR WITH PLANTS?
If you are new at gardening and are worried about how to get started, try the following perennial plants: Delphiniums, Foxgloves, Forget-me-not, Columbine, Peony, Phlox, German Iris, White Lupine, Hardy Pinks (Dianthus plumarius), Phlox divaricata, Chrysanthemum, Blue Lupine, Gaillardia, Alyssum sax. citrinum, Elder Daisy and viola. These plants will keep your garden gay and cheerful with a minimum of expense.

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NOTES FOR DECEMBER

By Helen Fowler

Broken tree branches should be removed

Broken branches ought to be removed from the trees immediately, if they are still partly attached to the point of breakage; otherwise they may rip away good wood as they swing in the wind. Neglect of this removal may lead to serious harm coming to the tree.

Paint Tools now for preservation

A good coat of paint is practical life insurance for the wooden parts of all garden implements; and too, it may aid identification if the tools happen to be borrowed by neighbors, especially if you choose some really aesthetic color, such as mauve, baby-blue, or ashes of roses.

Dormant Sprays should be applied at the right time

There is not much use trying to apply dormant sprays when the thermometer is below freezing or there is a high wind. Wait for favorable weather,—warm, clear and with no more than a light breeze blowing—but take advantage of the first opportunity.

Cocoons should be removed

You will find them in the crevices of tree bark, in pieces of old boards and other crannies. Many would hatch into harmful insects. A wire brush is the safest tool to remove cocoons from tree bark without injuring the trunk.

Flower Lilies-of-the-Valley in the house

Lilies-of-the-Valley are easily brought to flower in the house, if planted in bowls of special fiber, ob-tained at our seed stores. Get cold-storage "pips" or dormant plants from any good florist, nip off the lower two-thirds of their roots and plant so that the tips of the eyes are just showing.

How to mulch flowers

When mulching Peonies with manure, do not cover but just a bit, the actual crowns of the plants. To neglect this precaution means running the risk of having the roots rot, to say nothing of their shoots probably failing to bloom because their eyes have been too deeply buried.

Proper time to add garden mulches

When the ground has frozen hard, and not before, it is time to put on the winter mulches. Keep in mind the purpose of these coverings—to hold the frost, not exclude it. If applied too soon there is danger of field mice nesting in the mulch and burrowing beneath.

WILSON’S LAST BOOK

When the late Ernest H. Wilson turned from his study one day in the autumn of 1930 to go, on that rainy day, on the holiday that ended so tragically, be left on his desk the manuscript of a book. Today it appears under the title of IF I WERE TO MAKE A GARDEN. Included in the book are a memorial introduction and a portrait of Dr. Wilson. Perhaps this volume is his most valuable contribution to gardening literature. He tells what he would do if he were again to start a garden. This volume is on the shelves of the library at Horticulture House and we recommend it as one of those necessary garden books.—Helen Fowler.
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S. R. DE BOER OFFERS
A VALUABLE PREMIUM FOR NEW MEMBERS
A valuable inducement for new members has been made by S. R. DeBoer who has been a director of the Association for many years. This consists of a folio of landscape plans for front yards in the area. There are 8 different plans which can be adapted to almost any type of house or grounds. These show appropriate arrangements of suitable plants for this climate. If these were drawn up individually they would probably cost $50.00 each.

Mr. DeBoer is doing this for two reasons: to stimulate better landscape design and make a more beautiful state to encourage gardeners to become members of the Association.

To limit these valuable plans to those who will really appreciate and use them, and save mailing cost only one restriction is made: that those who bring in new memberships or renewals come in and get the plans at Horticulture House. They are bulky and difficult to mail, but those out of town can request them by mail.

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DECEMBER GARDENING

WINTER protection is the keynote of garden work in December. When the cause of most of our winterkill is understood to be our hot winter sun and dry air, it is then apparent that our chief concerns should be to see that the ground around all plants is sufficiently wet before it freezes up and that tender barked trees, tender evergreens or borderline shrubs have some shading from the severe southwest sun.

Check over the stored bulbs once or twice this month. Most of these bulbs will keep best at a temperature around 40-45. Gladiolus need little moisture, Cannas will almost take care of themselves if some soil is left around them, but dahlias are rather particular as to temperature and moisture. If they show signs of shrivelling when inspected, a moist sack thrown over them will help. If they show mould or rot they may be too wet and if they sprout they may be both too moist and warm.

While you are checking things, look over the house plants again for signs of the start of aphids, spidermites, scale, thrip or mealybug. Again, an ounce of prevention is surely worth many pounds of cure.

Each rose grower has individual methods of protecting his tender roses but the method of hilling soil up around them to a distance of six inches or so seems to give rather universal satisfaction. This should be done between the time that the leaves fall and the ground freezes (which in some seasons is a difficult period to determine).

Shrubs and trees which have low hanging limbs likely to interfere with walks when heavily laden with snow should be taken care of now. This may prevent some breakage to the tree and save someone's temper on a crisp snowy morning. Tall, slim junipers should be checked to see if they might be braced back to a building or another tree to prevent their being bowed down or broken by heavy snow.

One of the most important garden operations of the season may be done while plants are dormant and weather is still fairly warm. This is the dormant spray for the control of scale insects and control of certain other spiders, galls or aphids. Lime-sulphur or miscible oil is commonly used and is a technical job requiring careful mixture and application by adequate equipment if the trees are at all large.

When the plants outside in the garden are dormant our attention is directed to the plants that we are able to bring indoors. At the holiday season these bright spots of green and color are especially appreciated. Success with these plants depends very largely on careful attention to the proper soil to pot them in, to careful watering and regulation of the humidity in the air. If more than the succulents and hardiest plants are attempted it is well to provide additional humidity by having a teakettle on a stove, register or electric plate a few hours of the day at least.

SHRUB ARISTOCRATS

The Viburnum family is one of aristocratic shrubs. While they vary in color, all of them are beautiful in foliage, flower and fruit. The old-fashioned Snowball is the most widely known of the Viburnums. It is just a sophisticated child of the Highbush Cranberry that produces ball-shaped flowers and no fruit. Very much unlike the Snowball and other Viburnums, the Wayfaringtree has rather thick gray-looking leaves. Its fruit turns in the summer from green to yellow, then red and finally black. The Nannyberry has similar blooms but thin green leaves and large black berries. Producing small blue-black berries and with teeth-edged leaves, the Arrowwood is hardy and does well in the shade. Japanese Viburnums are not usually considered hardy in the Rocky Mountain region.

Where a tall shrub is needed one of the aristocratic Viburnums may be used effectively.