CLOUDS

By Burton O. Longyear

Looking aloft where I sit I see
Wonderful cloud forms drifting by
Like the waves on a wind-swept sea.
Over the landscape here below

Swiftly their shadows come and go
Phantom waves on a phantom sea.
June, and summer before me lies
With flowers and birds and sun-lit skies.

The Green Thumb
COLORADO'S GARDEN MAGAZINE
June, 1950

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Painting on cover and most of the drawings on page 16 are by Phil Hayward, commercial artist with the Rippey Advertising Agency. We appreciate these contributions by Mr. Hayward very much.

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Take Good Care of Your Babies

We are referring here to your baby plants—the ones that you set out this spring. You carefully planned just the right thing for each place, you found a good reliable nurseryman (probably a member of the Colorado Nurseryman’s Assn.) who sold you plants with well shaped, vigorous tops and roots that had never been dried out by bad handling or neglect. You planted these carefully, in good soil and in holes that had been carefully dug. You watered them in thoroughly and cut them back as necessary.

Your little prospective shade trees, perennials, shrubs, fruit trees and evergreens still look quite dormant, but you have high hopes for the effects that you have dreamed of from these things. Don’t consider that your job is done now, however well it has been taken care of up to this point.

One of the most common causes of the failure of newly transplanted stock is improper watering. The soil around plants should be kept moist, but not soggy wet, clear down to the farthest roots. A little sprinkling on the surface every few days does not do this. WATER THOROUGHLY EACH TIME but only frequently enough to keep the soil moist. Most plants require some air in the soil as well as water. The only sure way to tell whether plants have sufficient water or not is to dig in a ways occasionally and see. Don’t be too much influenced by the condition of the SURFACE of the soil.

Watch for the first sign of insect attacks on these little defenseless plants and spray or dust at once. Don’t let the surface of the soil become packed. Cut out competing weeds before they damage the plants. Mulching may help. New plants seldom need fertilizer—just good loose soil. Some of the finer plants will appreciate a little shade for the first few months. Tall plants may need some bracing. Tiny things may need some protection from thoughtless children and dogs.

You have a big investment in these baby plants already. Protect this investment by giving them the best care possible. If you do not know what they need ask your nurseryman or your neighbor with the green thumb.

COLORADO NURSERYMEN’S ASSOCIATION
See the February issue of the Green Thumb for list of members.
EIGHTY five years ago the first trees were planted in Denver. Sixteen years later 21 carloads of nursery stock was shipped into the city. These trees were of only a few hardy kinds. Today Denver has around 200,000 shade trees and perhaps 2,000,000 shrubs. Each year that goes by there are new plants added to the list that can be grown in the state, and in the last few years there have been several of our best trees removed from the lists of suitable trees because of serious pests.

The planting and appreciation of trees and other ornamental plants goes hand in hand with the aging and permanency of a community. When people feel that they want to settle down and really live in a community they improve their private and public grounds with suitable plantings.

For many years trees and other plants were simply planted out, watered occasionally and otherwise left to their own devices to grow or at least survive. Most of these trees were brought in from older communities where the climatic conditions were favorable for their growth. We could supply the water that they needed by artificial irrigation, but we did little towards correcting the other difficulties of plant growth found here. Our soil was alkaline, our air was dry, our winter sun hot, our spring weather very erratic and few of the natural controls of pests or diseases were found here because there were no native trees of these introduced kinds. After a few years various pests found their way here, and did not have much to stop their rapid spread. Scale insects especially seriously damaged our elms, ash and maple. Still we thought that we would “let Nature take care of them,” and did little to combat these pests. We found when we did begin to study a little about these things that most plant diseases spread less readily here and that many insects spread much more rapidly than they did in the East. We were compelled to devise new controls to fit our peculiar conditions.

During the last fifty years or so, there had been little demand for trained tree experts, so when, a few years ago many new pests suddenly became serious we were not prepared with sufficient trained men to combat them. We are now faced with the problem of training men in the proper care of trees and also training home owners to appreciate the value of these trained men.

It is not to be expected that every owner of trees will become a tree expert but everyone should learn enough of the principles of good tree care so that they may know when they are
getting a good job of tree work and when they might be having unnecessary or dangerous work done on their trees.

The first step in the program for better trees is the selection of suitable varieties for the location and their proper planting. Trees must be spaced

so that they have sufficient room for both top and root growth. Kinds should be selected which will grow in the shape and size to fit their environment. The soil where they are to be planted should be prepared and the holes dug large enough to allow a good start of root growth. The small trees must be carefully handled to prevent damage to the roots by drying winds or sun. They should be carefully trimmed or cut back when

set out, and they should be thoroughly watered at proper intervals.

We must learn that the most profitable tree work is that done when the trees are small, and also the later preventive work to keep them in good health. Vigorously growing trees will need little surgery or other expensive work, except for storm damage and certain pests. Most trees do not receive proper watering. The ground should be soaked deep and thoroughly around their farthest roots. We are gradually learning that most of our trees need a careful program of fertilizing. Spraying to control many insect pests and diseases has become a necessity. These things are worthy of separate treatment for they are complicated matters involving chemistry and the principles of plant growth. It is the purpose of this article to illustrate by pictures and words the most important principles of tree trimming, cabling and filling.

Before going into the technique of trimming trees we should review briefly the story of how a tree grows, for all effective tree care depends on a knowledge of the life processes of a tree. Mr. Pesman described this process rather fully in the December 1948 Green Thumb. We particularly need to remember that the crude sap flows up from the roots in the sapwood near the outside of the trunk and that the "digested" food, dissolved in water flows "down" to all the parts of the tree through the cambium layer, just under the bark. We need to know how the leaves "manufacture" this food through the

natural flow of sap has deposited new growth around the pipe in a vain effort to heal this wound.

This Silver Poplar had a piece of pipe fastened to it many years ago. This picture shows how the natural flow of sap has deposited new growth around the pipe in a vain effort to heal this wound.

Here is an extreme example of the dominance of man over plants. Contrast this treatment with the graceful informality of the Oak on page 6. Either system might be appropriate in their proper place. Picture of the home of Mr. and Mrs. Frank Harris, 2256 Franklin Street.
Tree limbs may be too low or too high, or lop-sided or conflicting. Note bad crotch which has split and repaired with a brace rod in upper left picture on opposite page. Crotches may be too sharp and subject to storm damage, or they may be at a sturdy angle and safe. Broken limbs and stubs need to be removed as soon as possible so that wounds may heal quickly without allowing decay to enter tree.
action of the sun on the chlorophyll in them, and that the roots are "soup eaters" and must have all their available food in solution.

The first principle to learn in the proper trimming of trees is that no cut should be made without a definite reason, and that it is as bad to make a cut unnecessarily as to not do any trimming at all. We might indicate that the principal reasons for trimming a tree are to:

1. Shape the outside of the tree to fit its situation, such as cutting low hanging limbs, interfering limbs, overly long limbs or those which have been forced to grow too high.

2. Build up a sturdy framework in the tree by cutting out cross limbs, duplicate limbs, dangerous crotches and weak limbs. Most of this work should be done when the tree is small.

3. Remove weak, dead and unwanted limbs as soon as possible so that the wounds may heal over and prevent decay and disease damage.

The proper methods to use in making necessary cuts will be governed by the principles of plant growth. The most important of these rules is that all cuts into the cambium layer must be "streamlined" so that sap flowing by from the leaves can rapidly deposit new cells to heal over the wound. The various techniques will be illustrated by pictures. The most common error is to leave stubs under the mistaken impression that these cuts make a smaller wound and so injure the tree less. Unless there are growing leaves beyond these cuts there is no possible chance for a flow of healing sap by them which could heal them over. They remain to decay and allow this decay to enter the tree and seriously damage it.

When we understand how a tree grows we can understand why "topping" or "skinning" off all lower limbs ruin both the beauty and health of a tree. The best tree experts will make necessary cuts as close to the trunk or larger limb as possible, then, if necessary, they will "point up" both upper and lower ends, they will smooth up any irregular places and shellac the cambium exposed to keep it from unnecessary drying out. They will disinfect the newly cut surface to prevent entrance of decay spores and will cover all these freshly cut areas with a good flexible tree paint to preserve it until the new growth can seal it up.

Trees of irregular growth or those which have been damaged by storms will frequently be benefited by proper bracing and cabling. This is a technical job requiring considerable experience and equipment. Properly done it can prevent much serious damage. Filling decayed areas in trees is a still more technical procedure. An otherwise healthy and long lived tree may be worth considerable work in this line, but an old, short-lived or badly damaged tree may not be worth much of this rather expensive work. Here is where you must trust the judgment of an honest and experienced tree expert.
Trees topped like this take on a twisted appearance after the first year and look like this after the second. Trees crowded like these become a distorted mass of limbs reaching for the sunlight. They can never become the beautiful well-balanced trees like this one of the famous Brown Oaks.

They become distorted and weak because of their competition for sun and soil room, or the lower limbs are unnecessarily skins off making them look bare and ugly like these.
This drawing shows how decay grows into a tree when a stub is left which cannot heal over.

Steps in safely cutting off a large branch.

Methods of properly pointing up a wound.

When a wound is not pointed up so the sap can easily flow by, it cannot heal quickly or properly.

Above shows car damage to base of tree, when properly cleaned out, pointed up and painted. Picture at right shows a similar wound a year later. This is healing perfectly from top to bottom.

A vigorous tree making an attempt to heal over a wound. This would be better if it had been pointed a little at top and bottom, and repainted to fill cracks.

Close cuts, properly made a few years ago. Now completely healed before there was any chance of decay starting in tree.
Properly made open cavity which is healing quickly.

Cement filled cavity in old apple tree, beginning to heal.

Triangular cabling & bracing systems as installed by single tree surgeons used & approved by National Park Service.

A well cared for tree is a valuable asset to any park or garden. Above is Soft Maple in City Park.
Several nationally-known rosarians who have dropped in on their coast-to-coast tours were kind enough to tell us there is nothing like them in the entire United States.

Already planted and started for you, Richards' Roses are growing in large pots in specially-prepared soil, fertilized to insure rapid and permanent growth and bloom. The acquisition of about 160 pounds of the finest rose soil with each dozen roses purchased entirely disposes of all questions as to the adaptability of your garden soil to growing roses and insures success the balance of the season.

Planting in Your Garden Is Reduced to the Ultimate in Simplicity and Ease! You Can't Fail with Richards' Roses

Richards' pioneered container-grown roses in the Rocky Mountain region and our eleven years experience with many thousands of plants is your assurance of quality incomparably better than the cheap imitations frequently offered.

PLANT NOW! IN FULL BLOOM!

Over 100 varieties finest 2-year budded field-grown hybrid tea roses (including all four 1950 AARS and the best of recent AARS), polyantha roses, floribunda roses, climbing roses.

NOW! TREE ROSES! Richards' leads again with tree roses in a variety of decorative containers; the finest varieties both on 38” standards and on special 24” "patio standards".

(For sale only at our gardens--cannot be shipped.)

Northern Colorado’s Garden Center

R I C H A R D S

at the end of West Mountain Avenue

FORT COLLINS, COLORADO

In Richards' greenhouses and in Colorado's finest garden store: SO MUCH to make outdoor living and your gardening less work and more fun!
WHAT ARE BOTANICAL GARDENS FOR?

M. WALTER PESMAN

MAMMA, let’s go and see the monkeys at the Zoo! Doesn’t that bring back happy memories of childhood? And don’t we all, grown-ups that we are, get a lot of pleasure from watching the lions and the polar bear, the monkey-island and the buffalo-hill?

Now plants don’t jump around of course, and flowers don’t provide the antics of little bear cubs. All the same, an arboretum or a botanical garden attract almost as many visitors as a zoo, both children and grown-ups. Only, the chuckles and the awe inspired by a zoo are replaced by a more quiet but joyous enthusiasm in a beautiful flower garden or tree collection.

As a public attraction then, a Botanic Garden is of first rank for a city. At certain periods of the year, in fact, it is an A-number-One drawing card.

“Come down to Kew in lillac-time, in lillac-time; Come down to Kew in lillac-time, it isn’t far from London!”

Similar songs might be written for the Fall Glory in the Arnold Arboretum, or the Rose Festival in Portland. Each Botanical Garden has its high spots, when its beauty “takes your breath away.”

Modern layouts provide not merely “one of each”, but have large groups of spectacular trees and shrubs, annuals and perennials, bulbs, hedges, what not. A number of gorgeous crimson and golden colors are placed together for full display, and are provided with a solid background of dark green as a conspicuous foil. This then constitutes the popular appeal of a Botanic Garden; it is only a small item in its many important functions. We are reminded immediately of the fact that the Royal Botanic Garden at Kew has been responsible for the introduction of rubber into the Malay Peninsula and Ceylon, and for growing the quinine tree in the Indies. In other words, Botanic Gardens may well become important economic assets.

We might go on and pick out, at random, a number of such functions of botanic gardens; some might stress one aspect, others two or three, depending on location, management, or even whim. Let’s rather make a systematic list of these functions. At least a dozen of them can easily be identified.

1. Practically all botanic gardens, and arboreums, serve as a popular show-ground of trees, shrubs, and other plants, either outdoors or in palmhouses, conservatories, ferneries, or other structures.

2. Collection of carefully labeled specimens act as a check-up on plants whose name is wanted, an identification method, superior to a herbarium, which is merely a collection of dried botanical specimens at one stage of their growth usually.

3. Since a botanical garden is constantly trying out plants from all over the world, it becomes in time an excellent dependable testing ground for both ornamental and economic plants, that may or may not be hardy in a particular region, or that may require special soils or special conditions.

4. Stations for Plant Introduction are needed in a variety of climates and geographical situations in order to give the best opportunity for survival and subsequent distribution. Doesn’t it stand to reason that an apricot from, say Turkestan, would have a much better chance of being acclimatized for further use in a similar climate like Denver, rather than to run the gauntlet from Turkestan to Massachusetts, to California, and so on? It takes a hardy specimen to survive such a radical change.

5. Production of New Plants through breeding, selection, and possibly through physio-chemical action, is becoming a more and more important function of modern botanic gardens.

6. Propagating Grounds for new plants and new introductions of exotic plants are necessary in order to distribute them efficiently and economically. Few private concerns can afford to take chances on the success of untried novelties.

7. Training of horticulturists is a tradition of long standing of the Royal Botanic Garden at Kew, and is a most logical function of any such institution.

8. Scientific Laboratories for the study of Plant Ecology, Plant Physiology, Genetics, and related branches are both necessary for their proper function, and also a natural outcome.

9. Laboratories for the production of economic and scientific Plant Products are logical attributes of the previous function.

10. Many Botanic Gardens and Arboreums have developed into educational centers for the public information about plants. Some have appealed to the young people, as the Morton Arboretum, others to the University level, as most European Botanic Gardens. Cooperation with schools, garden clubs and other organizations is in line with this function.

11. Publication of scientific and educational bulletins, books and pamphlets, and similar literature is a natural outgrowth.

12. Special Services for the use of horticulturists, botanists, home owners, and manufacturers of plant products have become important in some such institutions. Their character is often the outgrowth of particular needs and desires of a community. A collection of the best hedges may be shown, a well-landscaped back yard, an herb garden. This list is merely indicative of what institutions of this type have done or are doing. I am sure that many a reader, by this time, has thought of some other function that a Rocky Mountain Botanic Garden might well fulfill.

With the varied topography in the immediate vicinity of Denver, for instance, we could establish a most unique Botanical Garden, featuring plants of at least five different plant zones. Collections of alkali-resistant plants come to mind, a cactus and other succulents garden would be highly instructive, rock gardens and dry walls have opportunities.

What can be done with our many plants that have a milky sap? Can native rubber be produced? What drought-resistant plants may be introduced? What cross breeds of hardy ornamentals, vitamin-rich vegetables? New edible hawthorns—Are these fanciful dreams? Or possible realities?

The Rocky Mountain Region will, I am sure, give many a valuable plant gift to the world at large and to posterity.
The Package of Seeds

By Edgar A. Guest

I paid a dime for a package of seeds
And the clerk tossed them out with a flip.
"We've got 'em assorted for every man's needs."
He said with a smile on his lips;
"Pansies and poppies and asters and peas!
Ten cents a package! And pick as you please."

Now seeds are just dimes to the man in the store,
And the dimes are the things that he needs;
And I've been to buy them in seasons before,
But have thought of them merely as seeds;
But it flashed through my mind as I took them this time,
"You have purchased a miracle here for a dime!"

"You've a dime's worth of power which no man can create.
You've a dime's worth of life in your hand!
You've a dime's worth of mystery, destiny, fate,
Which the wisest cannot understand.

In this bright little package, now isn't it odd?
You've a dime's worth of something known only to God!"

These are seeds, but the plants and the blossoms are here
With their petals of various hues;
In these little pellets, so dry and so queer,
There is power no chemist can fuse.
Here is one of God's miracles soon to unfold.
Thus for ten cents an ounce is Divinity sold!

"The Package of Seeds" is from the book Collected Verse of Edgar A. Guest, copyright 1934 by the Reilly & Lee Co., Chicago.

CORRECTIONS AHEAD

Kathleen Marriage
Colorado Springs, Colorado

Errors creep into our language—or language—and become so established that they are as difficult to eradicate as crab grass from the lawn.
The word 'yard' used for ornamental areas puts a shiver down my back every time I hear or see it. A 'yard' was originally an enclosure to hem in animals or children, and was consequently bare of vegetation except for a wall. A yard may be a stable yard, chicken yard, play yard but it is not a lawn or garden. For goodness sake let us stop calling our lawns and shrubbery a yard. It is all garden, whether front, side, back or middle.

In pioneer times when little planting was done except vegetables a vegetable plot became a 'garden'. We still have the hangover from this, 'I've put in my garden but I've done nothing about my front yard yet'.

A bee in my bonnet? Perhaps, but turn to the best in horticultural literature and you won't find 'yard' applied to any planted area. William Robinson, Reginald Farrer, B. Y. Morrison, E. J. Salisbury, Helen Fox, they discuss gardens, not yards.

Another triumph if the Colorado Horticulture and Forestry Association could correct it internationally: the application of the name Colorado to the pestiferous potato beetle. Last summer when we heard of them in dense swarms in France and Belgium it wasn't pleasant to hear the name, "Colorado", applied to them. Possibly this beetle is the one connection with Colorado in the minds of many who suffered from them. Can't we do something about this? And keep on doing it until we succeed.
CONSIDER THE ORNAMENTAL GRASSES

HELEN MARSH ZEINER

In our quest for plants with which to beautify our homes we frequently overlook a most interesting group—the ornamental grasses. To many of us “ornamental grasses” brings to mind only the old familiar ribbon grass, but this is only one of many possibilities. Among the grasses we find annuals or perennials, showy inflorescences or striking foliage, low plants suitable for borders or tall plants for “fillers” in the perennial border or massing by themselves. Easy to culture, adaptable to many situations, the ornamental grasses deserve a place in the garden.

Grasses will live in nearly any garden soil, but they thrive best in a well-drained, good garden soil. Planting may be done in early spring or fall, with tall forms needing about two feet of space, low forms about a foot. A winter mulch of dry grass or straw is advisable. Occasional division will keep the perennial forms in check. Give the grasses the care you give your other garden flowers and they will reward you amply.

About fifty grasses are grown as ornamentals, about ten of which are commonly stocked by nurseries so that it is easy to obtain either plants or seed. Among the more readily obtainable and desirable ornamental grasses are the following:

- **Ribbon Grass**—Phalaris arundinacea picta—This is the familiar old-fashioned ribbon grass, a perennial form grown for its green and white foliage.
- **Pampas Grass**—Erianthus rastrae—A tall perennial with a beautiful silvery inflorescence. Sometimes listed as Blue Lyme.
- **Plume Grass**—Miscanthus sinensis—Nurseries may also list this grass as Eulalia. The plume grasses are tall perennials with large showy silky plumes of flowers. Three varieties are obtainable: gracillimus, with very narrow leaf blades; surrogatus, with blades striped with white and zebraus, with blades banded with white. The two variegated forms combine beauty of bloom with extremely interesting foliage.
- **Quaking Grass**—Briza maxima and Briza minima—These attractive tall annuals have interesting graceful flower clusters often tinged with purple or brown, desirable for winter bouquets.
- **Blue Fescue**—Fescue glauca or Fescue ovina glauca—Here is a grass with a definitely bluish inflorescence, low-growing and useful as a border plant. Perennial.

**Fountain Grass**, **Feathertop**—Pennisetum setaceum—A perennial with tawny to purple flower heads, frequently used in borders or around fountains, thus the common name “Fountain Grass”.

**Pennisetum ruppelii**—This perennial, which has been used effectively in the Denver parks, has lovely pink or purple blooms. Sometimes known in the nursery trade as P. ruppelianum.

- **Job’s Tears**—Coix lachryma—An annual grown primarily for its interesting seeds.
- **Striped Corn**—Zea japonica—An annual with a novel variegated foliage.
- **Cloud Grass**—Agrostis nebulosa—An annual with a delicate and attractive inflorescence, cultivated for dry arrangements. Less easy to obtain but desirable to try are:

- **Colorado Bunch Grass** or **Indian Rice Grass**—Oryzopsis hymenoides (O. cespitosa)—A native grass with a spreading, delicate bloom.
- **Oatgrass**—Arrhenatherum elatius—Large golden yellow to purplish flowers. Annual.
- **Ribbon Grass**, **Needle Grass**—A perennial with a few-flowered panicle, the spikelets bearing very long feathery awns.

THREE HARDY BULBS

T. PAUL MASLIN

Being a relative newcomer to the state, a migrant from California, I have very much enjoyed tackling the problem of learning to garden all over again in Colorado. Plants with which I unsuccessfully struggled there, grow like weeds here, and many desirable and lovely temperate zone plants apparently won’t grow here at all. For fear of offending natives I’ll quickly pass over the subject of plants which are said to grow in California but not in Colorado. In spite of my being reminded by derisive California friends that I might as well give up gardening, I could not resist bringing with me several of my favorite plants. I must admit that all of these fellow migrants have not succeeded, but some have, and one here I began eagerly exploring the gardens of new friends and have made a number of really gratifying “discoveries”. Among these and my fellow plant migrants are three bulbs which in my opinion deserve a little publicity. They can’t be complete strangers to Colorado, with so many experimentalists working here; but they certainly are not widely used or generally known.

The first of these I brought with me from California. Because of circumstances which could not be avoided it was necessary to cut off their foliage and dig the bulbs in August while they were still green. Plants with which I unsuccessfully struggled there, grow like weeds here, and many desirable and lovely temperate zone plants apparently won’t grow here at all. For fear of offending natives I’ll quickly pass over the subject of plants which are said to grow in California but not in Colorado. In spite of my being reminded by derisive California friends that I might as well give up gardening, I could not resist bringing with me several of my favorite plants. I must admit that all of these fellow migrants have not succeeded, but some have, and one here I began eagerly exploring the gardens of new friends and have made a number of really gratifying “discoveries”. Among these and my fellow plant migrants are three bulbs which in my opinion deserve a little publicity. They can’t be
times called — (Hyacinthus candicans or Galtonia candicans).

Late in the spring these bulbs send up massive, erect leaves about two inches broad and two and a half to three feet high; these are followed in July by a four foot, lacy stalk that bears about fifty white, pendulous, bell-shaped flowers. The lower buds on the stalk bloom first and for about a month thereafter the higher buds successively come into bloom as the lowermost flowers wither away. Personally I do not find the flower spike particularly attractive, especially as the withered flowers hang on and are unsightly; but a group of the plants is extremely handsome if for nothing else but the foliage. Extreme cold kills the leaves leaving them a soft pulpy mass, and because of their large size the rotting foliage leaves a relatively huge gaping hole in the ground. This has always worried me; but rather than dig the bulbs and cure them off I have simply covered the holes with soil to keep out slugs, millipedes, and frost. Whether right or wrong the bulbs survive. The plants thrive in full sun or partial shade and in any type of soil; but are inclined to rot in wet, heavy clay while they are dormant. This is a good plant and well worth growing as a foil behind such flowers as thin foliaged annual phlox, or low growing pink or blue Petunias.

The other two hardy bulbs I found growing in Colorado when I arrived. One of these, the Crown Imperial (Fritillaria imperialis), I heard about through a friend who had inherited them when she settled in Fort Collins. They had been growing undisturbed for years in deep shade east of a group of lilacs and west of her house. I could not recognize the plants from her description and as they were dormant then (July), out of curiosity I offered to dig and separate them for her and was graciously awarded with several odd, doughnut shaped bulbs for my pains. After literally groping through the soil for quite some time and over a considerable area I finally discovered the clump of thirty bulbs tightly packed together about ten inches below the surface. Taking my lead from this successful planting I placed my bulbs in rich soil on the east side of my own house where they were shaded from the morning sun by huge cottonwoods. That winter was a hard one with lots of late snow. But during a warm spell in March to my horror succulent lily-like stalks pushed up out of the ground along with the daffodils. These stalks carried beautiful, shiny, three inch, rich green leaves in dense whorls and were extremely handsome; but seemed hardly in place at that time of the year. When they were about eight inches high I dug them and nearly broke them to the ground. I thought they were done; but after the thaw they righted themselves and continued shooting on up apparently uninjured. Then in May a length of stem near the tip grew more rapidly, leaving most of the leaves behind. A cluster of buds then appeared benefiting a small tuft of leaves at the tip of the stalk. The plants were snowed under once more but after the thaw the unharmed buds opened into one and one-half inch, orange, lily-shaped flowers which formed an inverted crown around the tip of the stalk. I have become accustomed to the startling early growth of these large lilies; but their unseasonal beauty in our late snows always surprises me.

The Crown Imperial does not multiply rapidly; but once established they are quite permanent and may be left in place for years. Time for dividing can be determined by the number of stalks which appear. In the rich shaded soil at Fort Collins the bulbs doubled themselves in one year; but the lateral bulbs so formed were rather small, and did not bloom until the second year after they were separated.

Crown Imperials come in several colors, I do not have the reddish purple or yellow varieties but see no reason why they should not be as successful as the orange. The main drawbacks of the plants are their inability to tolerate strong winds and their unpleasant odor. In spite of this latter fault we pick them and use them in the house; for this purpose they are really choice, lending themselves to fine arrangements, and after an hour or two one hardly notices the smell. It is amusing, however, to see the polite but slightly puzzled expressions on the faces of our suspicious guests.

The last plant, and the most spectacular, has proved perfectly at home in both Fort Collins and Boulder. This is the hardy amaryllid Lily Lycoris squamigera. I inherited three clumps in my Fort Collins garden, but later discovered they had been given the previous owner by a neighbor two houses down who had quite a planting of his own. My clumps had been in place undisturbed for some six or seven years. They had been planted in a partly shaded spot in poor soil near the edge of our property where they ordinarily received but little water. Early in the spring these clumps push up their broad strap-like leaves. Usually the tips of the leaves are frost bitten but no harm is done to the plants. They rapidly develop into large coarse dark green clumps. The long leaves ripen off in July and then about a month later out of the bare ground naked stalks push up about two feet high. Each of these stalks then bears from three to six large, pink, lily-like flowers faintly suffused with blue. These flowers are startlingly beautiful at this time of the year and always arouse a great deal of comment. Before I left Fort Collins for Boulder I dug up these clumps and found that each consisted of from twelve to eighteen bulbs about six inches beneath the surface. I gave away most of these but took the rest to Boulder. Some were placed in shaded heavy soil and still others in poor soil in full sun. All grew, but the shaded specimens are doing rather poorly and never flower, nor do they multiply. Like many amaryllids these Lycorises seem to do best when crowded and left undisturbed. I might add that the catalog accounts ascribe to them a faint perfume; but my clone is scentless.

All three of the bulbs described above have tolerated temperatures of –30° F. for several hours’ duration and below zero weather for several days on end. They have also proved themselves capable of standing considerable abuse and in my opinion are worthy additions to any Colorado Garden.

The Land of the Incas

Everyone loves a vacation trip whether to some especially lovely spot near home, or to one of the mysterious far-off places of the world. Since many of us can’t quite reach the farthest places on our vacations, Mr. John T. Roberts is bringing them to us at Horticulture House, on Friday, June 2, at 7:45 P.M. Everyone who’s dreaming of a trip away from home (and who isn’t at this season?) will want to hear Mr. Roberts tell of his journeys in fabulous Peru, Land of the Incas. And no one can bear to miss the Kodachrome pictures of that far, strange, land which Mr. Roberts will show. Peru is calling you.
WILDFLOWERS IN JUNE

WE enjoy Colorado every month of the year. We appreciate the mild but invigorating weather, we admire the majestic views, we love the cool forests and the tall mountain peaks. We like to wander along the rushing streams and among the clear blue lakes, we like to sleep out under the stars and ski the snowy slopes, but the greatest thrill of all is to revel in the beauty of multicolored wildflowers in June. The first brave flowers open on the warm south slopes in April or even earlier, then the show gradually ascends the mountains until the highest peaks are reached in mid-June. During June many flowers are still in bloom at the lower altitudes while the earliest are beginning to appear at the higher elevations. One of the nicest places to see these mountain flowers at this season is in the vicinity of Squaw Pass. Here we may find almost anything from both the montane and sub-alpine plant zones. There are open meadows, dense wooded slopes, bare ridges, moist shady north slopes, little streamlets and swampy places. Seven roads or trails radiate from this lookout point.

Squaw Pass is about 34 miles from Denver, half way between Bergen Park and Echo Lake. It is a location easily accessible yet not on the main highway where many uninterested people pass. Right at the pass is a Forest Service camp ground, and good springs are in every direction.

For the average flower lover the most interesting things are those which grow on the moist north slopes. Here can be seen the delicate Twinflower trailing over the rocks and banks, the Pink Calypso Orchids may occasionally be seen and the Baneberry is found in sheltered spots. The dainty Dotted Saxifrage are plentiful in well drained places, Harebells may be seen all over and Columbines will be growing among the Aspen trees. Along the little trickles of water are masses of Chiming bells, Bitter cress, Shooting stars, Brook Saxifrage, Monkeyflower and Buttercups. On more open moist slopes will be Wild Strawberries, Wild Geraniums, Valerian and Stellaria. Shady nooks will shelter Mountain Arnica, False Solomon’s Seal, Alumroot, Twisted Stalk, Meadow Rue and Bedstraw. Tall plants of Waterleaf, Wild Parsnip, Scrophularia and Cow Parsnip are occasionally seen. Of the shrubs, Red-berried Elder, Gooseberry, Jamesia and Low Ninebark are common. Wild Iris, Blue-eyed Grass, Geum and Bog Orchids may be seen in swampy places.

As we travel along the road there will be patches of the Golden Banner, Golden Smoke, White Evening Primrose, Skull Cap, Purple Fringe and Wild Raspberry growing in the loose soil along the roadgrades. On dry, well-drained slopes will be masses of Kinnikinnick, Low Penstemon, Pussytoes and Chickweed. Individual plants of Yellow Parsley, White and Purple Loco, Yarrow, Senecio and Lupine will be found among the masses of Cinquefoil, Daisies, Sandwort and Vetch. Yellow Wallflowers, Goatsbeard, White and Purple Thistles, Tall Blue Penstemon, Gaillardia, Miner’s Candle, Prickly Poppy, Winged Buckwheat and Paintbrush will furnish accent points all over the hillsides. Among these other large plants will be occasional patches of Indian Hemp, Wild Onions and the little Skyrocket flower. Shrubs seen will include Thimbleberry, Chokecherry, Rock Cress, Bush Cinquefoil and Snowberry. Among the trees will be specimens or groups of Rock Cress, Green Gentian, Blackeyed Susan, Anemones both white and pink, and the tiny little Yellow Draba.

This area should sometime be included in the statewide series of Botanical Reserves for it is ideally located for this purpose.

By the time that we have seen all these plants, it will be almost close of day and if we are lucky we may sit and watch the brilliant colors of a mountain sunset come and go. Then we will finish the last of the sandwiches, take a full drink from the cold mountain spring and head back for civilization and the job next day.

This may be too much of a trip for everyone to make in a day but we recommend that it be taken in installments if one is not in condition to make it all at once.

June, 1950

THE GREEN THUMB
THE following is an extract from a letter written us by W. O. Edmondson, Extension Forester and Horticulturist, in Laramie, Wyo.

"I have glanced through your May issue of the Green Thumb, and I think the magazine is getting better and better. One story I should like to remark about is the one by Mrs. Bertha Peterson, on "Fort Collins, the Lilac City of Colorado." I also saw an item in the Denver Post three weeks ago on this subject. I think it is a grand idea.

"I do object though to the statement that Fort Collins will become the Lilac City of the Rocky Mountain Empire, because we have in Basin, Wyoming, the first city in this empire, according to past records, to become the lilac city of our state, and it could well be dubbed the first lilac city in the Rocky Mountain Empire. They bought and planted over 500 lilacs in the spring of 1936, on private property, around homes and along streets entering the city from the north and south. These lilacs were planted in combination with about 500 tamarisks and the colors are marvelous. These lilacs were not out in bloom last week when I was in Basin, but they are surely a riot of color about May 20 to June 1.

"I wanted to give you this information because I helped Mr. A. C. Coons (now deceased) to pick out a number of the lilacs at that time and I lined out plans for most of the plantings which the city made along the roads entering the city. May I ask that further publicity on this very worthwhile Fort Collins project be called the first of its kind in Colorado but the second in our Rocky Mountain Empire? I love Fort Collins, having graduated there a long time ago, and I congratulate them heartily on their project."

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Rose Arrangement

The rose is often considered a man's flower. Since he grows it, he is interested in displaying the rose. Alfred T. Ryan, an instructor in the School of Floral Design, will demonstrate the arrangement of roses on June 16th. With a man of unusual ability as instructor, the rose as the featured flower, the program is especially designed for men. Mr. Ryan will provide an entertaining as well as instructive evening, as he demonstrates hobbies in arrangement, conversation pieces and the fundamental principles each man will want to learn.

Other garden flowers will be arranged, but the tips on rose arrangement will be timely as the Rose Show will take place the following saturday.

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Books Received During the
Month of May
The Herbaceous Border by Frances
Perry.
Fieldbook of Natural History by E.
Lawrence Palmer. The author is
professor of Nature and Science
Education at Cornell and Director
of Nature Magazine. This book
is the culmination of a life-time
of work in Natural History. In
cluded are 2,000 subjects with a
detailed drawing or photograph for
every subject. Practically every
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Landscape with Shrubs and Flower-
ing Trees, by Mary Deputy Lam-
son. To be reviewed at length next
month.
Prints and Plants of Old Gardens, by
Kate Doggett Boggs. Scheduled for
review later.

HELEN FOWLER

BOOK REVIEW
By Helen Fowler

What J. W. Johnson, Horticultural
Editor of New York Herald Tribune
says about Henry B. Aul’s, “How to
Beautify and Improve Your Home
Grounds.”

“At last, here is the book, which, in this writer’s opinion, will
prove one of the most valuable garden books of the past twenty-five years.
I recommend this book to garden mak-
ers with a fervor I have felt for few
garden books in my thirty years of
horticultural writing.”

In Mr. Aul’s book, he insists, and
rightly so, that a garden has two
great uses, namely, to look at and to
live in, with the latter the most im-
portant. This is no banal volume, but
a living picture of the worthiness of
good design, and laid out so that the
work of the garden can be planned
and executed by the average gardener.
The author understands fully that
most small gardens are built with little
money and out of love for gardening
rather than from the standpoint of
vulgar display. In this book, packed
with ideas will be found beautifying
plans for small lots and large, corner
lots, narrow ones, hilly ones, city
and country ones.

Question: When I take my walk
in the morning I pass by places where
the trees are whitewashed. What is
this for?

Answer: This was practiced some
time ago but with the use of the new
insecticides today, it is now little prac-
ticed. These insecticides may be ob-
tained at the seed store and applied
in the early spring. This was done
to prevent growth of moss and lichens
and to destroy insect eggs.
BOOK REVIEW
HOME ORCHID GROWING
by REBECCA NORTHEN

A very interesting book on the growing of orchids in the home has just arrived at the horticultural library. It is written by Mrs. Northen, wife of Henry T. Northen, plant physiologist and Professor of Botany at the University of Wyoming. She began growing her orchids in her kitchen window and gradually added to her collection until she has two greenhouses full. She collected a great deal of information and experience and has given us her knowledge in her very interesting book.

She says in her preface “Where once there were few orchid growers, now there are thousands; where once orchids were owned only by those who could afford an elaborate greenhouse and a trained grower, now there are little backyard greenhouses springing up everywhere. Busy people from all walks of life, as well as those who have retired, are finding relaxation, joy and excitement in their orchids.”

She says it is her endeavor to help the amateur with his problems as far as possible. Her book is designed to give the beginner a start and advance him through the years in every phase of orchid growing. She says people want to know the “why” in this age and she has tried to give them the facts which will help them. Much of the information in this book has never been given to the amateur before.

Orchids are not so different from other plants. They demand certain treatment and if they are given this treatment they respond. They even make themselves at home with the ordinary house plants.

The book has beautiful illustrations, many of which were made in Mrs. Northen’s own home and greenhouses.

She gives the principal tribes, genera, species and many hybrids of the very large orchid family.

It is a very delightful and interesting book to read even if you do not think you have the urge to grow orchids—Myrtle Ross Davis.

ETHELYN C. STEWART

The first comprehensive showing of the paintings of Ethelyn C. Stewart in the West will be held at Horticulture House, from June 10th to June 30th.

The exquisite flower paintings of Miss Stewart have been purchased by Delos Chappell, J. P. Morgan, Jr., Mrs. Christian Holmes, and other prominent families. Her work has been accorded prizes by the Pennsylvania Academy of Fine Arts; the National Association of Women Painters; the National Academy of Arts, and other groups.

Miss Stewart is also noted for her etchings and paintings on silk and other textiles, specimens of which will also be on display at Horticulture House during the exhibition.

Boulder, the Arboretum City

Boulder has taken to the idea of making of the city an arboretum. About a year ago they realized that they had unusual horticultural possibilities and that there were a large number of rare trees and other plants growing in the town. The Boulder Garden Club took on the job of labeling these trees, evergreens and shrubs. On May 7th, they arranged a tour of the city to display the hundreds of these things that had been labelled. These labels are mostly 4 x 10 inch boards with the name burned in so that it is readable from as far as across the street. Mrs. Marjorie Brown with her committee has worked hard to make these labels, place them and make a list of the trees and their location. While Maud Reed has left Boulder the horticultural signs of her stay in the city remain in the form of her unique high school garden and the planting on the bank behind the athletic field.

It is a pleasure to observe the work of communities who are doing things for the sake of a good job done rather than just for their names on a bronze plaque.
CULTIVATION: As the new plants begin to grow the weeds begin to grow even faster, for they were there first. A little work when the weeds are very small will do more good than much work later. At the same time that weeds are eliminated the surface of the soil around trees, shrubs, perennials and annuals can be broken where it has become compacted from watering or tramping. This loosening of the surface does not need to be deep, for that might damage many roots. More and more, good gardeners are using suitable mulches to eliminate much of the traditional cultivation. Leaves, past, straw, old manure or sawdust have been used effectively. Where there is no chance to damage valuable plants the 2,4-D weed killers may often be used to advantage, but this material is dangerous if it drifts on to good plants.

SPRAYING AND DUSTING: As the new plants begin to grow it is not long until all manner of insect pests show up and take their toll. Here, as with weeds, "a spray in time" is worth more than the later attempts to eliminate them after they have done considerable damage. Aphids will usually be the first things seen. They will be on spirea, spruce, delphinium or juniper. Be on guard, especially with the evergreens, for the damage done usually does not show up until weeks after the insects have come and gone. Ants running up a plant will usually tell us of aphid infestation. These aphids require a contact poison such as nicotine, pyrethrum or some of the new chemicals to control them. If there are caterpillars, beetles or other chewing insects damaging the plants they should be controlled with a stomach poison such as arsenate of lead or one of the new insecticides like DOT or chlordane.

WATERING: If the garden has had normal watering up to June it should be in good shape. Start now training the plants for the hot weather to come by watering them thoroughly at each time but less often. Newly transplanted things will need a little extra attention.

OTHER CHORES: If fertilizers and mulches have been applied as needed early in the season, little need be done now. Later, when trees, lawns and flowers slow up they may be given a little "shot" of some quick-acting fertilizer.

If you have forgotten to get roses or some other plants earlier, when the bare-root transplanting season was on, they may often be had now in paper pots at some nurseries who feature this kind of material. Don't cut all the leaves from tulips after they bloom unless you do not care for flowers next year, for they require these leaves to develop energy in the bulb to produce next year's flowers.

As one of our main difficulties in growing eastern plants is the drying action of our hot sun, it is well to provide partial shade for many of the plants which are brought in from the east.
CL O U D S  

By Burton O. Longyear

Looking aloft where I sit I see
Wonderful cloud forms drifting by
Like the waves on a wind-swept sea.
Over the landscape here below

Swiftly their shadows come and go
Phantom waves on a phantom sea.
June, and summer before me lies
With flowers and birds and sunlit skies.