The Green Thumb

Magazine for Rocky Mountain Gardeners

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SEPT.-OCT. 1960

25 Cents

COLORFUL COLORADO FALL COLOR TRIPS
The many miles of winding streets of Applewood MESA, on the slopes of Table Mountain, or on the more gentle slopes at the foot of the mountain — together with the spacious, irregular sites and individually planned customed homes — provide the utmost in quiet Western living.

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MEMO

MEETINGS

York
September 21—Fun With Golden Bells Garden Club, 909 York Street, 10:00 a.m., the third Wednesday of each month.
September 22—Civic Garden Club, 1 p.m.
September 28—Hudson Garden Club, 7:45 p.m.
October 1—Botany Club, 7:30 p.m.
October 2—Orchid Society, 7:45 p.m.
October 6—Judges' Club, 11:30 a.m., the first Friday of each month.
October 10—Botanic Gardens Horticulture Show, "The Leaf in Your Life." November 5, 10 a.m. to 11 p.m., Large Ballroom, Student Union Building, CSU Campus, Fort Collins.
October 11—Evergreen Garden Club, 7:30 p.m.
October 12—Organic Gardeners, 8 p.m.
October 13—Washington Park Garden Club, 1 p.m.
October 15—Colorado Forestry and Horticulture Association, 11:30 a.m.
October 16—Colorado Horticulture Association Board Luncheon, 11:30 a.m.
October 17—Sloans Lake Garden Club, 12 noon.
October 19—Fun With Flowers Workshop 1, 10 a.m.
October 20—Golden Bells Garden Club, 2 p.m.
October 27—Civic Garden Club, 1 p.m.

ATTENTION ASSOCIATION MEMBERS

ATTEND OUR ANNUAL PICNIC

Place: Botanical Gardens House, 909 York Street

Date: Saturday, September 24, 4:30 P.M.

Bring Your Own Picnic Lunch

Coffee and Ice Cream will be Furnished by the Association

Program and Entertainment

George Kelly will Show Slides and Tell of His Latest Trips After Which There Will Be a Community Sing.
NATURE DOES NOT PLANT THINGS IN ROWS—OR NATURALISTIC SPRING BULBS

By M. WALTER PEMAN, Landscape Architect

"SHOULD a garden be an improvement on Nature?" This is a question that has bothered garden lovers ever since the "naturalistic" type of landscaping was first proposed in the beginning of the eighteenth century. Not until man perceived the beauty of nature did our gardens change from straight lines, formal planting, and man-made designs.

This appreciation of nature "in the raw" came to the Orient much, much earlier, as reported by the monk Odorici, who went to China in 1325. England was the first country to apply it in its gardens, and now most countries have both "formal" and "informal" gardens. It is mostly a matter of degree: to what extent is our garden predominantly "man-made", where do we allow nature to take the lead?

Tulips and other spring-flowering bulbs have mostly been used in formal beds, planted at set distances. Even when planted in so-called "informal" borders in drifts—"the general effect is man-made. How can we achieve a more natural result?

There is a much-quoted method for planting in line with nature's arrangement. Applied to tulip bulbs, for instance, it goes like this: gather up fifty or more bulbs in a wicker basket, stand close to the place where you want them planted, then with a light semi-circular motion throw them all out in one sweep, and plant each one exactly where it lands. Some will fall close together, others will roll on for a distance, the farthest ones may be very scattered; no matter, that is the way nature itself scatters its seeds and plants. It will be effective.

Don't worry if some bulbs are crowded, let them come up like that. (Did you ever examine carefully how nature's own "drifts" are made up?) Incidentally, this method of planting is quite satisfactory to the artist-gardener, who insists that his flowers be arranged in the garden with the same nice feeling as they would be in a table arrangement. A "drift" in the flower border corresponds to the "spray" idea in an asymmetrical bouquet.

Carrying through this same idea, why not have a "repeat" in your design: the same tulip might be used in two or three spots, with the proviso that the spots are of varying size and shape. It catches the eye pleasantly and it provides color without monotony.

So far we have talked about bulbs in the border. There is no reason why they should be confined to the border proper. Some of the most satisfying effects can be had by groups of bulbs that seem to come up as volunteers in the most unexpected places. I am reminded of a little cluster of Clara Butt tulips that peeked around a few spires bushes, most effectively. And where was it that I saw a compost heap virtually invaded by an army of grape hyacinths?

One of the most grateful bulbs in this naturalizing is the little Siberian squill (Scilla siberica). Once you have it started it will spread in the inimitable manner of nature. I planted a few among a neglected shrub border of coralberries, Japanese barberries and Flowering Almond. The first year I was careful not to distur them. Now I pay them no heed and they have spread over a radius of twenty feet. Evidently their seed is actually propelled on ripening, at least it is coming up in the most unexpected places just where I want them most. Shade seems to be no obstacle, since it comes out so early in spring.

Much more difficult to get established, but evidently worth the trouble, is our Snowdrop (Galanthus nivalis). It must have shade even in less sunny climes, and in Colorado is not too happy unless it is planted in a woody area, possibly with some soil acidity.

Once we have had success with this idea of acclimatization of bulbs, we are prone to try it with various kinds of bulbs. Usually the result is good—as long as we keep our common sense. I'll never forget one case where I was carried away with the idea of a large mass of yellow daffodils in a naturalistic setting, among cottontrees. The fact is I had seen beautiful pictures illustrating just that. It was like a dream—tha is, the picture was.

Our reality was devoid of all satisfaction. Yes, the daffodils came up, hundreds of them. But just at the time they were at their best,—here were not hundreds, but thousands of dandelions competing with them: the same color, the same season. I found out how a dog feels when he sniffs away with his tail tucked in.

Another nice idea in theory does not work out too well in reality, namely dotting a lawn with crocus, in the pleasant English manner. It works all right for one spring in Colorado. We are too lawn-minded here to allow our crocus to complete their
growth in an unmowed lawn, as they do in England. Keeping the lawn trim cuts the crocus foliage and the new bulb does not have time to form. The result is that we have to add another couple of hundred the next fall if we want to realize the picture in our mind. That is rather expensive.

On the other hand, scattering crocus at various odd spots is most soul-satisfying. Those first yellow crocus suddenly appearing are making us feel that spring is right around the corner. Then come the dark purple and the other colors, one after the other. Except in the lawn, they'll complete their growth and the foliage will disappear without being noticed. (That is where a narcissus is less accommodating; even if we tie up the ripening foliage in neat bunches, it is far from inconspicuous in a flower border.)

Before mentioning the scores of other less-known spring bulbs, let us come back to our tulips and narcissus, the good old stand-bys. It is true that they can be used for staid borders,—the early low tulips are particularly good for that. On the other hand, the naturalistic planting has unlimited possibilities. I remember one satisfactory planting where the colors and sizes had been so carefully chosen as to make a perfect gradation from low creamy and yellow, through the medium-sized pinks and reds to the tallest breeders with the dark maroons, mahoganies, and metallic purples. To make it a success, intimate knowledge of the varieties is needed.

Luckily there are few color clashes among tulips! Even the gorgeous Red Emperor is not too difficult to blend with others. (But why not give it a spot all to itself?)

Lately the so-called "botanical tulips" or "tulip species" are beginning to show up in our gardens. They fit our dry climate, since many of them come from dry sunny locations in Asia Minor, Greece, Central Asia, and similar places. Put them in the rock-garden, or in warm nooks. Some are most accommodating, others most fastidious — all named after the place they came from originally — and many have been described. Some of the tulip species are particularly good for that. The Tulipa chilensis, sometimes called "CandYSTICK," Tulipa kauffmanniana or "Waterlily tulip," earliest of all, T. sylvestris, and T. turkestanica are gone in color. Even T. kauffmanniana and T. sylvestris are gone in color.

Group of Crocus

Left to right, Kolpakowskyana—Turkestanica—Biflorana

Left to right, Persica—Saxatilis—Acuminata
The following narcissus species are now in the trade: N. bulbocodium or Petticoat Daffodil (should be quite popular now that petticoats have returned); N. juncifolius, with narrow leaves; N. Triandrus, known as Angel's Tears, and of course, N. jonquilla, the fragrant Jonquil with a number of flowers on one stalk.

(It will take constant hammering on gardeners to make us remember that a jonquil is not the same as a daffodil, but that both are called narcissus).

If you are interested in the numerous spring bulbs, and who isn't once you have seen them—try them in your garden.

All of them are best in irregular plantings, for — "nature does not plant things in rows".

Your beautiful green lawn, like so many other component parts of your garden and home development, is a living, growing organism that requires occasional care, proper treatment and frequent repair to remain at its very beautiful best. In a sense, it could be compared to wall-to-wall carpeting of your living and dining area—except of course in the garden it becomes fence-to-fence rather than wall-to-wall property.

Nevertheless, it is that portion and setting of your garden which perhaps from the standpoint of appearance, should be as nearly the same through the years as possible, while the other component parts (the trees, shrubs and flowers) steadily change, increase in size, beauty and color and in flowering season.

Fall is a very good time to do this repair work on your lawn. First of all, there are few other garden activities competing for your time and attention. Secondly, the mending and repair work that you can do now will save you and will be so much better established in the spring than if you postpone this activity until perhaps mid-April of the following garden season. One of the most important jobs that needs attention in the fall is the actual replacement of turf in certain areas where it has either become worn or it otherwise was lost due to disease or mechanical injuries. Such turf areas would normally invite you to do a job of reseeding, and in most ordinary circumstances, reseeding of an area is a very good practice and one which has been employed by gardeners in the Rocky Mountain area for years and years, with great success.

The difficulty, however, in reseeding a worn area is not so much in re-establishing turf in itself as it is really in re-establishing turf that will last out another growing season and will successfully leaf out again the following year. Many people in the metropolitan area of Denver have reseeded certain portions of their garden year in and year out with never-ending patience without ever reaching this goal of re-establishment of their lost piece of grass. So actually, the job is not alone in reseeding an area, but there is more to it than that as we shall see henceforth.

To begin with, when a piece of turf is lost, there must be a cause for this loss. And unless we determine the cause and correct it, the re-establishment of a lost grass area is very much in doubt. The second problem that I see in reseeding an area in your lawn is due to the fact that after we seed this area, we must give it the same kind of care for about two weeks as if it were a brand new lawn to be established for the first time on virgin soil. In other words, you have quite a job on your hands in watering and general maintenance to be sure that this young seedling grass is going to make a mature plant before freezing weather sets in.

Here is where many people fall down, as they are not prepared to give...
sank during the summer, and places of mending in about three or four months. Also releveling may be necessary around your sidewalks and driveway where the lawn is getting taller and higher all the time. If you will cut the sod away from the walk, remove soil underneath, and then set the sod slightly below the level of the concrete, this too will save you many hours of hand-trimming and you can simply roll your mower over the concrete on one side and do a clean job of cutting each time you mow your lawn. Simple isn't it, and yet so many people leave this undone.

The other method is by adding small quantities of sand twice a year or at the outside, ½ inch of sand at one time. Then you would allow the crowns of the grass plants to raise enough in time to accommodate this increase in height. This can be done very easily, and it works. I have tried it successfully, and it has given good appearance and has done a good job of mending in about three or four months. Also releveling may be necessary around your sidewalks and driveway where the lawn is getting taller and higher all the time. If you will cut the sod away from the walk, remove soil underneath, and then set the sod slightly below the level of the concrete, this too will save you many hours of hand-trimming and you can simply roll your mower over the concrete on one side and do a clean job of cutting each time you mow your lawn. Simple isn't it, and yet so many people leave this undone.

Yes, fall lawn repair is a good garden activity. Take it in your stride. There is no need to hurry this along. The season is long and will last out your program I am sure, and next year you will have the most beautiful lawn in many years.
In July a friend asked me about moving a large pussy willow that was in an objectionable place. I asked, "Why move it now when its chance for survival would be much less than if you would wait until it is ready for the winter?" An experienced gardener knows, of course, that you can move many things "out of season" if you have the right know-how (the green thumb!). But he will also agree that when it is unnecessary to take chances, trees and shrubs should be moved while in a non-growing condition. So, this is written mainly for the great number of our readers who belong to the comparatively inexperienced group of gardeners (about three out of every five in rapidly-growing urban areas).

Let us first go over some of the fundamental principles that govern plant growth through the seasons, to see what changes occur within the plant that make it more tolerant of the injuries sustained during moving from one place (such as the nursery or another place in the garden) to a new spot. For you cannot move a plant, unless it is container-grown, without considerable injury to its absorbing roots. Even a balled and burlapped specimen receives some injury to its roots.

Now, the first principle to continually bear in mind is that a plant operates upon a sound set of economics, or else it goes "bankrupt" and that means certain death. During the growing season the plant must store all of the food that it will need for the rest of the year, plus a bit left over for its start of new growth the next year. This means that a plant must make enough food by photosynthesis—sugar, starch, and all of the other food substances—to supply its needs for growth during the summer and yet have enough left to put in its "savings account" for later use. Perhaps its savings account is more like a piggy bank, because there doesn't seem to be any provision for payment of interest. At any rate, it is important to remember that it takes a proper supply of healthy leaves to insure that plenty of food is stored.

A second principle to keep in mind is that plants use water very extravagantly, wasting most of it by loss into the air, when their leaves are green, but they waste little during their non-growing periods, especially if they drop their leaves. This also affects our decision as to how and when to move trees and shrubs, for, as mentioned earlier, roots are damaged and injured roots cannot absorb water fast enough to keep up excessive water loss.

So, if we move a plant when it is out of its protection of dormancy the next freeze kills the softened tissues. Along this same line, the alternate thawing and freezing of the bark on the south side of smooth-bark trees will kill the cambium. We call this condition "sun scald".

Another problem of survival in our drier states is the moisture loss from even dormant trees and shrubs. Few people realize how much moisture is used and lost by leafless woody plants during fall and winter.

What do these remarks have to do with our beginning question? Is it safe or is it dangerous to move woody trees and shrubs in the autumn? I hope that I am not going to hurt anyone's feelings when I say, "Go ahead and plant in the fall." Up until a few years ago I was as vehement as anybody in warning against fall planting. So why the change? Well, first from observation then from personal experience I have learned that there is no danger in fall planting if a gardener knows what the problems are and takes proper measures to overcome them.

But why should I recommend planting in the fall? The answer to that one is that most of us are very much part-time gardeners and have so many other things to do we find we cannot get all of the planting and moving done in the early spring. In the fall when there is a slack period but still many nice days to get out and work, we can safely do the moving that might be done with too little preparation during the usual "planting time". I have tried ever since last March to move some French hybrid lilacs, but could not find the time (and weather). So, I have resolved that as soon as they go into their rest period I will move them. And I think they will bloom next year, too!

So, now let us summarize by putting down the steps to successful fall moving of deciduous trees and shrubs.
1. Plant carefully by placing the roots in a hole that is larger than the root system. If the specimen is bare-rooted, sift a mixture of well-rotted compost or peat and soil around the roots and gently firm it. Finally when the hole is filled with soil, let water run into it until it is completely flooded. Do not stir or tamp the soil now, but let the water sink to the soil then add more loose soil at the surface to make up for the settling.

2. Mulch the surface with straw or coarse leaves to a depth of at least five inches. This will prevent rapid changes in temperature and hold the moisture all winter long.

3. Shade the tree or shrub (this is helpful but not always necessary). If stakes, or screen wire are put in place about three inches from the trunk of a small tree on the south side or around a bush (mainly as a wind break for bushes) there will be an improvement in the next year’s growth.

4. If many of the roots have been damaged (you have to judge each case individually) prune the tops proportionally. But, it is not necessary to prune as much as we often do when spring planting. During the longer period in place, and with a good mulch, the roots will heal and grow more before spring growth starts.

I practiced all of this in November, 1958, and last summer picked as many currants as I had the summer before off the same bushes. While this may not work equally well for everything, I can recommend it for a wide number of species. So if you have the urge to plant this fall, go to it.

To view the brilliant gold of masses of aspens or watch the trembling of their leaves in the sunlight is an experience once seen will always be remembered. The aspen, *Populus tremuloides*, was called the quiver tree by the Indians. In late September and in October a trip into our mountains is almost as urgent as getting outdoors on the first spring days.

As the season advances the gay color of the aspen descends from the mountain summits to the lower valleys. The change in color is gradual but a severe snow or frost may produce a sudden change. During the Indian summer days the mountains are magnificent with the golden splendor of dense groves of aspens against the dark green of ponderosa pine and Douglas fir.

In the canyons at lower altitudes the narrow-leaf cottonwood, *Populus angustifolia*, often mistaken for aspens by the passing motorist shimmers in the autumn sunlight. On the plains the broadleaf cottonwood, *Populus sargentii*, turns a pale yellow, intensified somewhat by the blue sky. The boxelder, *Acer negundo*, turns a brighter yellow.

Among our native trees and shrubs yellow is the predominant color in the fall foliage. The clear bright yellow of the mountain maple, *Acer glabrum*, and of the thimble berry, *Rubus deliciosus*, found along the streams and in the canyons is always pleasing.

A few shrubs turn red. The most conspicuous is the sumac, *Rhus glabra*, abundant in the lower foot hill gulches and mesas. After the leaves fall the brilliant red heads of the sumac add a splash of color to the landscape. If picked at the right time these seed heads are most vivid and last well without fading throughout most of the winter.

Extending into the foothills west of Sedalia and southward the scrub oak, *Quercus gambeli*, a shrub or small tree offers shades of red, bronze, and brown. The wax flower, *Jasminum americana*, is an attractive shrub in the canyons of the foothills turning red and orange. The wild rose bushes have reddish leaves among which the bright red fruits or “hips” shine.

Another spot of color may be a low training shrub, the poison ivy, *Rhus radicans*, a member of the sumac family. The poison ivy (leaflets 3) is of-
ten mistaken for the Virginia creeper or woodbine (leaflets 5), a member of the grape family. The waxy yellow-white berries are born in loose panicles, while the berries of the woodbine are blue-black on red stems in clusters. The leaves of both plants turn to shades of red and orange red. The poison ivy is very poisonous to some persons, but others seem to be immune. The poison is given off in a volatile oil from the leaves and young stems.

The autumn foliage in our cities is man planted. The bulk of color comes from the soft maple, Acer saccharinum. The light brown of the American elm and the pale yellow of the cottonwood are important in the color picture in City Park, Washington Park, and throughout the city. In Washington Park the buckeyes turn color early to bright orange while the other trees are still green. Among other trees whose leaves turn yellow are white ash, Fraxinus americana; honey locust, Gleditsia triacanthos; black walnut, Juglans nigra; willow, Salix; tree of heaven, Ailanthus altissima, and bur oak, Quercus macrocarpa.

The leaves of the hard or sugar maple, Acer saccharum, turn red and gold. The oaks pick up the color scheme in brilliant scarlet of the scarlet oak through the dark red of the pin oaks. The scarlet oaks on the Civic Center turn a deep reddish mahogany. The white oaks turn yellowish to brown and retain the leaves all winter. This is also true of the bur oaks.

A beautiful red oak stands at the entrance of Botanic House, also a fine tree at the north end of Cheesman Park, another on a small triangle on 17th and Downing. Recently a red oak has been planted on the Sixteenth Street side of the Hilton Hotel. We hope it will thrive and each succeeding autumn become the talk of the town.

In our gardens there are shrubs which turn yellow, but not the clear gold of the ash. A few turn russet and purplish red. Members of the Viburnum family are in this group. The lilac has a slightly purplish tone, the forsythia is russet and purple and the Japanese barberry is red or bronze red in leaf color.

Our native dogwood, Cornus stolonifera, has white fruits and bright red stems and the leaf turns red. Patches may be seen in Cheesman Park. Near the memorial building is the bright red burning bush, Euonymus, with interesting orange fruits.

Many of the flowering crabapples are ablaze in the fall landscape with their brilliant red or yellow fruits. The hawthorns are perhaps more conspicuous in their fruiting season than at any time of the year. The Washington thorn, Crataegus phaenopyrum, has brilliant red fruit. The Amur maple, Acer ginnale, offers gold to scarlet foliage.

A good opportunity to observe autumn color in several types of trees presents itself in Fairmount cemetery. Years ago several desirable types of trees were planted there and have developed into beautiful specimens. A fine sugar maple with red and gold leaves is conspicuous in the fall. Large Norway maples turn yellow. The sycamores have leathery brown leaves. Mountain ash trees with yellow foliage and bright berries are scattered here and there. Bur oaks and white oaks are sizable trees whose yellow form a striking contrast against the evergreens. Some smaller red oaks also may be seen.

Foliage colors are more beautiful in the sunlight which gives them an intensity which is absent in the shade and on dull days. We have a fine opportunity to enjoy these beautiful colors on our many sunny autumn days.

Dear Reader:

This is your invitation to attend the Colorado State University Horticulture Club presentation of the 1960 Horticulture Show, "The Leaf In Your Life." The Hort Show, the only exhibition of its kind in Colorado, will occupy the Large Ballroom of the Student Union Building on the CSU Campus in Fort Collins, Saturday, November 5, 1960.

At 10 a.m. Saturday morning, the Club members will open the doors of the largest Hort Show in the history of the Club. Since the Show's beginning many years ago in a classroom (about 2,000 square feet) it has continued to grow and expand. This year's Show will cover nearly 12,000 square feet and will include more than a dozen educational and informative displays and demonstrations as well as a day long program of horticultural movies, garden and flower arranging clinics and half a dozen or more large, decorative displays.

Spectators will see the large area depicting a beautifully landscaped patio and lawn which will include real turf, 15-20 foot evergreens, shrubs, flower beds, pools, and landscape lighting. A "Garden of Grottos," accented with tropical flowers and plants, will be backed by several realistic grottos and the sound of falling water. The 1960 Horticulture Queen's throne will be surrounded by a beautiful Colorado Carnation Fantasy of pastel tinted carnations with aspen trees, yucca plants and babysbreath in matching colors.

Because of the important role that the CSU Horticulture Department is playing in the ever growing and developing horticultural industry, the major aim of the Hort Show is to inform and help further educate the general public in horticulture. To do this in the 1960 Show, a series of displays and demonstrations by graduate Horticulture students will show the effects of filtered light, temperature, nutrients and carbon dioxide on carnation plants. Students studying and doing research with artificial growing media will demonstrate and explain "tip culture." Undergraduate students will present displays and demonstrations in Plant Propagation, Fruits and Vegetables, Floriculture and Floral Design, Landscape Design, and Turf Management. The Colorado Gladiolus Society will also feature a display of educational and informative importance.

The Hort Show is the most important undertaking of the Horticulture Club at CSU. An auction of all the materials used in the Show (floral arrangements, plants, fruits, vegetables, etc.) is to be held Saturday evening from 8 to 11 p.m. The income from this auction finances Club activities, including the CSU Flower Judging Team's participation in annual national competition.

Relatively few people put the Show together each year. But it would be impossible without the assistance of many professional horticulturists throughout the state of Colorado and, in many instances, across the United States. The Colorado Flower Growers Association and its members play one of the most important roles by contributing the many flowers, plants and equipment that make the Show possible. Colorado canning companies, Denver wholesalers and other "pros" of the industry all do more than their part to help put the show on the road.

May we again invite you to come to the CSU Campus in Fort Collins on November 5, 1960 (Show time, 10 a.m. to 7 p.m.; Auction, 2 p.m.) to see the enjoyable and educational 1960 Hort Show.

Very cordially,

THE CSU HORTICULTURE CLUB
Phil Easter, Manager
1960 Hort Show
SAVE THOSE TENDER PLANTS

By Dr. Helen Marsh Zeiner

Some tender or non-hardy plants have long been garden favorites. Today the number in common use is increasing with the popularity of patios, accentuated with potted plants, hanging baskets, and outdoor planters. Since many of these plants are too tender to overwinter outdoors in this climate, they must be brought in or left to die. They may represent a considerable investment, and the gardener on a budget will certainly wish to hold them over for another year. It is not difficult to keep most of the common non-hardy plants, although they do not all need the same care. Following is a list of some of the more commonly used non-hardy plants, with directions for their winter care:

**Begonia semperflorens**, the wax begonia. These are the small, free-flowering begonias often used as house plants. They are now frequently used as edging or bedding plants as well as patio plants. If these begonias are potted, simply bring them in and treat them as house plants. If they are in a planter or a border, it is best to take cuttings which can be rooted readily in moist sand, vermiculite, or perlite. The cuttings may also be rooted in water, if this is more convenient. As soon as the cuttings are well-rooted, they should be potted in a good potting soil and maintained as house plants until spring, when they can be set out.

**Begonias, tuberous.** Long a favorite in the shady border, the tuberous begonia will do well in planters or porch boxes on the north side (or any shaded side) of the house or patio. There are some very beautiful hanging types for use in baskets. When the first frost has killed the foliage and flowers, take up the tubers and shake off the excess soil. Spread the tubers out to dry, then carefully clean off any remaining soil and dried roots. Put them in dry sand or dry peat moss and store them in a cool place where the temperature is above freezing. A basement fruit cellar is usually good. The tubers may also be kept in plastic sacks with ventilating holes, such as those in which vegetables are sold. About the last of February or the first of March, the tubers should be planted in pots or shallow boxes. They may need to be transplanted to a larger container as they develop. By the time all frost danger is past, you should have well-developed plants to set out.

**Canna.** This is an old time favorite, particularly for bedding. Some of the newer cannas are dwarf, and much more usable than the old-fashioned very tall-growing cannas. As soon as the foliage begins to dry up, the rhizomes may be dug and left with any adhering dirt until they are well ripened. They should then be stored in peat moss or sand in a frost-free place, such as a basement. If they are stored dry, watch for any signs of shriveling and then moisten slightly. Some growers recommend moist cool storage, which is satisfactory as long as the tubers are kept moist, never wet. If they are stored in moist sand, watch for any appearance of mold. If mold does occur, let the rhizomes dry out. It is generally advisable to divide large clumps before storage.

**Coleus.** This is the common foliage plant used in so many ways. Since it roots readily and grows rapidly, it is best to take cuttings and start new plants. It can be handled in the same way as the wax begonia. Since coleus tends to be a rapid grower, it is wise...
to pinch out the tips of young plants to insure bushy plants.

**Dahlia.** After the first frost, dig the tubers, dry them carefully, and store them in peat moss or sand in a cool place where the temperature will remain above freezing. In this dry climate, some growers prefer to keep the sand slightly moist.

Another method of storage has been developed by Dr. P. P. Pirone, Plant Pathologist at the New York Botanical Garden. He conducted tests with the aim of discovering the problem of dahlias drying out in storage. By first dipping the tubers in a Wilt-Pruf mixture (4 parts water — 1 part Wilt-Pruf) allowing them to dry and then storing them in dry peat moss he obtained 100% protection against tuber desiccation.

**Geranium.** If the geraniums are in pots, they may be brought in just as they are and kept in a sunny, but cool, location. This will give you large plants for another year. If you prefer the smaller plants, or if the geraniums are planted directly in soil, it is best to take cuttings. Cuttings taken in the fall should give you nice young plants to set out in the spring. You may try pulling the plant and hanging it in a cool place, or packing them in boxes with soil around the roots and storing them in a cool basement. However, our climate is so dry that these methods are not always successful. Taking cuttings remains the best method for overwintering geraniums.

**Gloxinia.** We are familiar with the gloxinia as a house plant, but it can be used very effectively outside as well. As time for frost approaches, withhold water to ripen off the leaves. Store the pots at about 45°, giving them just enough water to keep the tubers from shriveling. When they begin to show signs of growth (February or March), shake off the old soil, and repot in a good potting soil. If the plants were not in pots, dig the tubers, shake off the soil, dry in the air, and store in ventilated sacks until February or March when they should be potted.

**Oxalis.** This versatile little plant is often used indoors, but it is a very effective border plant and will do well in partial sun. Sometimes this plant will live through the winter outdoors, but unless it is a mild winter, it may witherkill. Therefore, it is best to take it indoors. The plants may be dug, the tops trimmed back, and the plant potted and cared for as a house plant. After a period of rest, they may bloom during the winter. The bulbs may also be cleaned off, permitted to dry, and stored in ventilated plastic sacks or in dry sand in a cool cellar.

**Peruvian Daffodil.** This is a beautiful lily-like plant belonging to the Amaryllis family. As soon as frost threatens, it should be dug with great care in order to save the heavy roots which grow out from the base of the bulb. If these are removed, the bulb is usually damaged, and may not flower another year. Shake off loose dirt carefully, dry bulbs a few days, and then store in ventilated plastic sacks in a cool basement. A fruit cellar is ideal.

**Storage.** If there has been any evidence of corm root or scab, the corms should be treated with full-strength Arasan dust for corm rot, or soaked in mercuric chloride solution (1 ounce per 7 ½ gallons of water) for two hours for scab. This is poisonous—be careful.

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plant only varieties that are known to be hardy in our area. Among chrysanthemum varieties there are all degrees of hardiness. Under our conditions we need more winter hardiness in chrysanthemums than in almost any other part of the United States. Weather records show that on occasion, Colorado winter temperatures can be discouragingly low. A variety that is hardy in Philadelphia might be tender in Denver. Also (except in the mountains) we may not have sufficient snow-cover to protect the plants from severe cold. A chrysanthemum plant under a heavy blanket of snow in Vermont may survive when the official temperature is 30 degrees below zero. The same variety may freeze to death at 15° below zero on the bare plains of Colorado. Whenever anyone says that a chrysanthemum variety is hardy he should say where!

Early-blooming chrysanthemum varieties adapted to cold climates are of recent origin. Thirty years ago only one Colorado nursery catalog included chrysanthemums. These were not listed by name but simply as "hardy bronze", "hardy white" and "hardy yellow." On growing them I found that they were named varieties but the nurseryman had apparently lost the labels. As I recall it they were respectively Alice Barham, Tasivia and Lorette. All were early enough for our climate but inferior in hardiness and flower quality to many modern varieties.

Some milestones along the long road that led to early, hardy varieties for cold climates may be worth noting here. The chrysanthemum probably was first brought to America from England in the latter part of the 18th century. Up to the end of the 19th century its out-door culture was mainly in southern gardens where long growing seasons matched its late blooming habit. During that period, however, greenhouse production of this flower developed tremendously and greenhouse varieties and cultural techniques reached a high degree of perfection. It was not until the 20th century that much attention was given to garden varieties.

Then, through introductions from France and the efforts of American breeders, many early-flowering varieties became available to American gardeners. Prominent in this work were Elmer G. Smith of Adrian, Michigan, Charles Totty of New Jersey and E. H. Marchel of the Dreer Company in Philadelphia.

About 1917, F. L. Mulford of the U.S. Department of Agriculture began collecting early-flowering chrysanthemums from nurseries and doorways of the eastern states. He also imported the earliest English varieties. He saved seed from open-pollinated flowers of the earliest-blooming plants in this planting and grew numerous seedlings. Seed was again saved from the earliest-flowering of these new seedlings and more seedlings were produced. This process was repeated through many generations. From these progenies 22 varieties were selected and introduced between 1937 and 1940. All were early-blooming and of dwarf habit and most were superior in flower quality to early types of that day. Some also had considerable hardiness.

Meanwhile other breeders were making significant progress. In 1932, R. M. Kellogg Co., of Three Rivers, Michigan, introduced the cushion type of chrysanthemums under the name of "Azaleamum." These were early-blooming and fairly hardy. The flower quality was disappointing but the mass effect was attractive.

In 1928, Alex Cummings of Bristol Nurseries, Bristol, Connecticut, began crossing Chrysanthemum coreanum with early-flowering cultivated types. This was the first time that a chrysanthemum breeder had departed from the species Chrysanthemums morifol-
PLANT NOW WITH CONTAINER GROWN NURSERY STOCK

By John Cramer
Manager Creative Gardens Nursery & Garden Shop

At the time this copy comes off the press and you receive it at your home, Fall won't be far away. Naturally, none of us likes to hear about Fall but, on the other hand, we, in this part of the country, are fortunate to have such a lovely Fall. It is one of the finest seasons of the year. The temperature is pleasant and the colors are beautiful. We are all getting up steam again to do some garden work. Mother Nature inspires us to do so. When we look around seeds are falling; what could be a better indication that this is the most suitable time to plant. We are all ready and boiling over to again get our hands in the good old dirt.

In the past months we visited many gardens, some of them were on the Look and Learn tours, so well organized by Horticulture House. We discussed our problems with various people in the Horticultural field and are full of ideas. We noticed in the months past that some of our planting arrangements were not too good; some of the foliage, the textures, or the colors were not quite the way we wanted them. We were also concerned about the heights; some were too low, others too high, some plants needed filling in. With all this information gathered up, we now can go to a Garden Center or Nursery where a pleasant surprise awaits us. Here we find a great assortment of well filled bins of many varieties of trees, shrubs, roses, and perennials which have all been grown in containers. Now we can see, right in front of us, the plants we have visualized growing in a particular spot of our yard.

We make our selection. The next step, and this is where we used to get into trouble, is the actual buying of the plants at this time. It is not too late that some of our planting arrangements were not too good; some

Chrysanthemums are usually planted in spring. However, this is one perennial that does not mind being moved at any time, even when in full bloom. The clumps are simply dug and reset in the new location. The modern nursery practice of growing chrysanthemums in containers makes off-season planting easier. As previously mentioned the varieties for the colder parts of Colorado and the Great Plains and Rocky Mountain areas farther north, the same varieties are recommended as being the hardiest available. For areas with milder climates, there is a much wider selection of varieties. In making such selections the catalogs from eastern and mid-western nurseries, advertising hardy varieties, may not be of much help because our climate is so different from theirs. Instead the local nurserymen, garden advisors and experienced gardeners should be consulted as to adapted varieties. With new varieties which have not been thoroughly tested in our area, one should proceed with caution. It takes several years to adequately test a new variety.

Chrysanthemums are well adapted to our alkaline soils and our bright sunshine. They thrive either in full sun or partial shade. They grow in a wide variety of soils. Being heavy feeders they prefer a soil rich in nutrients. Established plantings will benefit from a liberal top dressing of manure which may be applied either during the growing season or when the plants are dormant. A complete chemical fertilizer may be substituted if necessary. Chrysanthemums are usually planted in spring. However, this is one perennial that does not mind being moved at any time, even when in full bloom. The clumps are simply dug and reset in the new location. The modern nursery practice of growing chrysanthemums in containers makes off-season planting easier. As previously mentioned the varieties for the colder parts of Colorado and the Great Plains and Rocky Mountain areas farther north, the same varieties are recommended as being the hardiest available. For areas with milder climates, there is a much wider selection of varieties. In making such selections the catalogs from eastern and mid-western nurseries, advertising hardy varieties, may not be of much help because our climate is so different from theirs. Instead the local nurserymen, garden advisors and experienced gardeners should be consulted as to adapted varieties. With new varieties which have not been thoroughly tested in our area, one should proceed with caution. It takes several years to adequately test a new variety.

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dropped enough that it stops the sap flow in the plant and the leaves drop off. Then the plant is dormant and safe to transplant. What are we doing I am sure anyone who has missed out on this tremendous improvement change officers along with the state, too. At the State convention in Love- land, Sept. 7-8-9, the following officers were elected:

President—Mrs. C. C. Buckbee, 4190 De- praw Ave., Denver 12
First Vice-President—Mrs. R. C. Wilson, 5991 So. Pennsylvania, Englewood
Second Vice-President—Mrs. W. D. Ella, 1006 Main St., Grand Junction
Third Vice-President—Mr. W. M. Fleischer, 1642 Clarence Ave., Denver
Fourth Vice-President—Mrs. E. G. McKee, St. Dolores
Recording Secretary—Mrs. Esther Holtz, 831 Lincoln Pk., Boulder
Corresponding Secretary—Mrs. Donald R. Moore, 4735 Sanilchury, Wheatridge
Treasurer—Mrs. E. W. Mintken, Box 867, Idaho Springs

Before Loveland (our 30th annual), there was Houston, Tex., and a na- tional convention which some of our members attended including: Mrs. D. W. Viles, Mrs. F. S. Mattocks, Mrs. Sylvia Christiansen and Mrs. Ruth Woolley (C. C.) Buckbee. Later, reporting be- fore the Judges Council, Ruth com- pleted upon some of the high-lights and side-light’s to wit: “A Garden Club Member must— Look like a girl; Think like a man; Act like a lady; Work like a dog.” After all this, should she become an arranger of sorts or a judge this G. C. member could say: “I ain’t what I ought to be, I ain’t what I aim to be, — But I sure ain’t what I used to be.”

Our National Flower Show Schools chairman, Mrs. William H. Barton, has demonstrated a stated fee (the italics are mine, it’s all right to dicker a little, eh) above their Gardens, either in digging, setting, weeding, or the Appetite to his Victualls, the smell of the Earth new turned up, by digging with a Spade which will produce it, and if he be inclined to a Consumption, he shall recover him. Gentlemen if the ground be not too wet, may doe themselves much good by kneeling upon a Cushion and weeding. And thus both seats might divert themselves from Silliness, and evil Com- pany, which oftentimes prove the ravi of many ingenious people. — William Cole, 1657.

Landscape Contractor

LEW HAMMER WE 5-5938

COMPOSING

By Mrs. John Scott
Colorado Federation of Garden Clubs

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Before leaving this amateur versus professional, I want to mention two who are well known in their fields. The one, Mrs. Marion Black Williams, Colorado Springs, District Director for the Garden Writers of America Association, is an avid reader of the Green Thumb and author of "How our Garden Grew" in Popular Gardening, July. Mrs. Williams is well grounded in gardening and tells it most interestingly in many publications.

The other celebrity is Mr. Mann of the Cliff Mann Floral School, Denver. In an illustrated talk, he showed an O'Bowl (trade name for holding basin that you might like. His arrangements made several pyramid designs that could be viewed from any direction, that it might be fun to imitate. He used the term "Front-face" and "Back-side"—the term that probably prompted others to light-up. It's the foliage that leaves the most interesting design. Strip's "deco" of its artificial leaves, and use with evergreens or houseplants or flowers to gain a year-long lasting reputation. Hope your money holds out.

A few flowers to come to the new varieties I tried out in my garden this year. Three Sonjanas, the ornamental climbing strawberry, costing about $7.00, better yet, the trellis or they'll be amongst the missing another year. The trio arrived from the Atlantic coast in the green of vigor. They never stopped trying to make fruit, which I never ceased to illustrate. But as for making runners up the wire fence, or anywhere else. No. They just set. Strawberries have long been a hobby with me, perhaps I've lost my knack.

For Armstrong's Grandiflora, Pink Parfait and Hybrid Tea, Duet, they're all the advertisements claim them to be—and that's a fact. Pink Parfait reminds me of a corsage, a bride, little girl having tea with her doll. Its petals feel silky, but they are deceptively durable. Duet has spunk. I picked some in full bloom, placed them in a glass in the kitchen, where they remained for a week (without so much as a change of water) and they looked all right, until touched. They collapsed, then. Duet is definitely an arranger's rose. Both varieties have sturdy canes, show good substance and have bloomed all summer with a minimum of care. Buy them.

Fall, for me, is the time to transplant. I divide the perennials and move those that didn't re-act as I thought they should, as to height, width, color, etc. I also, get rid of those plants that are run-of-the-mill. I want a plant that will do something for my landscape, excel a cutting flower, and if dried, have an interesting form, texture or color that can later be converted into Brittle-Beauty-Bouquets or designs. The seasons are too short and the elements too temperament to tamper with anything but posies that please. If you'd like to know what to plant to satisfy those demands (or others) have a look at The Concise Encyclopedia of Favorite Flowers compiled by Marjorie P. Johnson, Managing Editor, Flower Grower and edited by Montague Free. There may be other and better sources, but the idea is you can make your garden work for you, instead of you working for it.

September's full of fruits, fall foliage and mums. They're all easily arranged. September's a back-to-school month, too, and we're all afterdue. A timely show schedule (adapted to other home and social functions) might be "School Daze". At any rate, create your designs around the little Red School House, an apple-for-the-teachers, yellow school buses; school bells; lunch baskets, etc. — the three R's, slates, now called chalk boards; pencil boxes; signs saying "School Crossings", "First Grade"; "Principal" etc.; or wall cards — illustrated penmanship, the alphabet, etc.; you'll come up with more and better ideas. Hope you get an A, or is it an E for Effort? See you in November if the Goblins don't get me.
ORGANIC GARDENING AND COMPOSTING

Several months ago we received a letter asking, "What is organic gardening?" We referred it to Mrs. John Newman who has practiced organic gardening for many years. Below is her reply.

Dear Friend:

I shall try to answer the question in your last letter, "What is meant by Organic Gardening?"

Organic Gardening is nature's way of gardening. The vegetation wilts and falls, the wind blows soil on to it, then the birds and animals deposit their droppings upon it, the rain and snow moisten it. After a while there is formed a thin layer of very black rich soil.

We, of course, can't do it that slowly so we make compost piles. There are several ways of doing that. One a very quick way. It is ready in about ten or twelve days. The large piles that are built up slowly and covered with soil are ready in about seven to nine weeks.

The undecayed material is screened out and used as a starter for a new pile.

Another way is to use organic fertilizers. I use mostly Atlas Fish Emulsion. It is not expensive, as you use only one tablespoon to a gallon of water. When we had the large garden we put a bottle of emulsion on the hose and sprinkled it out, finishing with clear water to wash the fertilizer off the leaves onto the ground. The fertilizer was then cultivated in when the ground was workable. I also use some Milorganite. I am sure there are other organic fertilizers, but these are the two I use.

When the compost is ready, I always work a shovel full into the ground where I am going to plant. If you are planting in rows, pile the compost about six inches deep then till it in. Remark the row and plant.

In transplanting I always water the plants in with a solution of the Fish Emulsion. I very seldom lose a plant. Have moved my roses in July and every one came along fine. I don't advise you to move yours at that time, but when you plan to sell the ground and must move what you want to save, try my method.

If your soil is built up by organic fertilization, your plants will be very healthy. Healthy plants resist pests and diseases so that sprays are not necessary. The soil will be very friable. It will be extremely easy to work in. The weeds will come out easily and the cultivating will be no trick at all.

I hope I have answered your question. If not, call again and I shall try to do better.

Sincerely,

J. W. N.

The following method of making compost is a partial reprint of an article entitled "Compost in Six Weeks" from the October-November 1958 Green Thumb. It was written by Melanie Brown from information provided by Mrs. Jan Schoo.

HOW TO MAKE COMPOST

There are many methods of composting. Mrs. Schoo uses the formula perfected by the late Sir Albert Howard. She has speeded up this classical or "Indore" method from three months to about six weeks by shredding or cutting up vegetable and animal residues and turning the piles more often. The same proportions are used — two thirds vegetable and one third animal residues with a layer of earth on top. The addition of Fertosan hasten the breakdown.

Almost any vegetable matter can be used — leaves, weeds, stalks, chaff, grass clippings, kitchen wastes, coffee and tea grounds, spoiled hay, corn flower stalks, oyster and egg shells, sawdust, pine needles, hedge trimmings, pomace, sea weed, cornstalks, meal, cocoa bean shell, brewery hops, etc. For animal matter, horse, cow, swine, sheep, or chicken manures are excellent. The best location is a fllied area, well-drained and close to a supply of water. It should be enclosed by a thin layer of very black rich soil.

When the compost is ready, I add a shovel full to the ground where I am going to plant. If you are planting in rows, pile the compost about six inches deep then till it in. Remark the row and plant.

5. Walnut leaves have toxic substances as do the roots and husks.

6. Sawdust, when it is over 5% of the amount of materials in the heap, may retard decomposition.

LOCATION OF A COMPOST HEAP

The best location is a fairly level, welldrained and close to a supply of water. It should be enclosed by a fence, hedge, or wall, or if it is small enough, in a box. The size of a compost pile is adaptable to the amount of space available. The top of it should be saucer shaped to hold rain water or tap water. A pile should be kept as damp as a squeezed out sponge. Mrs. Schoo uses six wooden boxes. The first one is used to accumulate garden or vegetable wastes. The second starts the process with a mixture of two thirds vegetable and one third animal residues. When the second box is full it is dumped in the third and so on until by the sixth box it is finished. Boxes one and six should be larger than the other four.

During the initial breakdown, properly made compost reaches a temperature of 150 degrees which will kill all weed seeds. During this stage, it should be turned frequently and kept damp. Otherwise air loving bacteria will not live and the heap will putrefy. As this fermentation takes place the pile will shrink to about one third its original size. Turning the material in succeeding boxes is less important because a new type of bacteria takes over that is not dependent on air. While there is still undecomposed matter, though, turning is advised.
TIME TO START COMPOST
Fall or spring is the best time for making compost. Mature compost can be put on as a mulch in fall or as a fertilizer and soil conditioner in spring. In fall, half finished compost may be applied because by spring decomposition will be complete. The addition of bonemeal and cottonseed meal increases its worth as a fertilizer.

HOW TO APPLY COMPOST
It is best to apply compost only to the top four inches of soil after it has been spaded up. This has a double purpose — it provides plant food and serves as an effective mulch against extremes of temperature, hard rains, etc. Apply compost liberally, 1 - 3 inches thick every year. Finished compost cannot burn. If you wish a higher analysis, add a commercial fertilizer. Organic gardeners never add anything of chemical nature but prefer raising the nitrogen-phosphorous-potash content by adding 1 part cottonseed meal, 1 part fish meal, 2 parts bonemeal, and 2 parts woodash or greensand. These will equal Morgro or some other similar commercial fertilizer in nitrogen-phosphorous-potash content. Compost is best when applied soon after it is completed. However, it will not hurt it to stand awhile. If this is necessary, turn the pile from time to time and cover it with burlap or with a heavy mulch of straw or sphagnum moss until you are ready to use it. For greater bulk, add peat moss.

If there are any further questions, Mrs. Jan H. Schoo, 2650 Dexter, Tele. DE 3-1249 will be glad to answer them or to show her compost boxes.

THERE is a unique subdivision of new homes. Unique in that it contains many large and beautiful trees. These trees were part of the land before the home building began, yet the building activities have not disturbed a single bough. The success of this community is proof that progress and beauty can be strong partners. This combination takes vision and a man who truly appreciates the worth of a tree, not in dollars and cents — he knows that, too—but the tree's worth in shade, its long years of growth, and its aesthetic value to his subdivision. He has written covenants to protect them. Drive out to Applewood Mesa, take a lunch, hike over the trails and see for yourself.

Our subdivider with vision is Mr. Myron Bunger. He grew up in this area. His people were Wheatridge truck farmers. They loved their land. His kinship to trees is strong and reminiscent of Mayor Speer who was responsible for Denver's tree lined streets. To insure continued planting in his community he has purchased and distributed over 400 seedless cottonwood trees and is maintaining a trial nursery at his home. This nursery contains many unusual and hard to grow trees and shrubs.

Let Mr. Bunger introduce you to the "natives." On the slopes of the mesa he showed us Mountain Mahogany, Paint Brush, Prickly Pear, Chokecherry, Wild Plum, Native Clematis, and Western Virgin's Bower. Yuccas were in all their spring glory when we visited there. A trip along the trails revealed many Colorado wild flowers and native grasses. The steep slopes of Table Mountain were bright with Indian Paint Brush.

Buyers are encouraged, yea, required to keep the natural contour of their site. Mr. Bunger will point out the lichen covered rocks and suggest how they may be preserved and used to the greatest advantage. Sites are spacious, and irregular in size—providing the most in quiet Western living. It is delightfully different.

How do the present residents like their area? Do they cooperate in the preservation of the trees, the growth, and contour? They do, and they have added to the native plantings.

Drive through the many miles of winding streets, first through the gentle slopes at the foot of the mesa, then on the steeper slopes of Table Mountain. See for yourself this subdivision that is truly different.
**INDOOR GARDENING SCHOOL**

Dr. Helen Zeiner will begin a new class on house plants October 17. It will run through November 14. Classes will be held at Botanic Gardens House from 2-3:30 p.m. on Mondays only. Registration is $5.00 per person and must be in to the Botanical Gardens Office by October 10.

Home Landscaping Course. Thursday evenings, September 22 through November 17, 7 to 8:40 p.m., at the Colorado Medical Center, Building A-2, 19th and Birch, Denver. Registration fee is $10.00. M. Walter Pesman, Instructor.

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**DIG THESE QUESTIONS**

**Question:** When can I divide my tulips?

**Answer:** Tulips may be divided from the present time until the ground freezes. They may be reset immediately. A depth of 10 to 12 inches is recommended for this area.

**Question:** What is meant by “hardening off” plants?

**Answer:** By “hardening off” plants, we mean gradually decreasing the amount of water given them, thus discouraging succulent growth which readily winter kills. At this time of year, lawns should be watered less frequently than in summer. Cutting waterings down to once a week or once every ten days promotes good root growth and puts the tops in “winter condition.” Shrubs and trees should also be watered less frequently, resulting in a harder woody growth which will not be readily winter-killed.

**Question:** My tomato plants are loaded with green tomatoes which I know will not all ripen before frost. Can I ripen these in the house in any way?

**Answer:** When frost threatens, carefully pick the green tomatoes and wrap each individually in a piece of newspaper. Store in a box in a cool place such as a fruit cupboard in a basement. About once a week unwrap and check for ripe tomatoes. You will find that there will be a gradual ripening, so that you may have tomatoes for weeks.

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**SEASONAL SUGGESTIONS**

As autumn delicately and gracefully envelopes our majestic Rockies, cooler nights and shorter days cause us to glance toward the mountains. We can see the color nibbling at the quakies in the high country. Just a smattering here and there at first, but by late September the pace begins to quicken. Entire forests burst forth in a new cloak of yellow as the greens of summer disintegrate before the forces of nature. Slowly and steadily this yellow mantle advances down the mountainside, splashed here and there with the reds of the shrub maple and sumac. Truly, autumn is a spectacular time in the Rockies, but we have to get out to see and enjoy it. Set aside a weekend for one of the trips suggested by the map on the front cover.

The changes of nature have also crept into our gardens. We find that orange, yellow, and bronze flowers become more prominent. Many shrubs and trees take on added interest as their fruits and berries ripen and color. Their leaves, like the aspen, also begin to color. The majority are yellow, but a few, like the sumac, euonymous and oaks, present vivid red and orange displays. Now is the time to observe these plants that transform a dull fall picture into a beautiful and colorful scene. Take note of the ones you would like to have in your garden to round out its period of color and bloom.

Now is a good time to take stock of your garden. If you haven’t a garden notebook, start one. Record in it the successes and failures of the past growing season. This way you won’t have to trust a rusty memory next spring when planning your garden.

Of course, all this color change indicates that winter is on its way and that we should prepare our gardens for it. Tender bulbs such as glads, dahlias, cannas, and tuberous begonias must be dug and stored. (See article on page 282.) Our shrub and perennial borders should be mulched, and in late October or early November our roses should be hilled up. More about this next issue.

Our watering practices should change so that our trees, lawns, and shrubs have an opportunity to harden up for winter. Water sparingly until
the end of October, then give all your plants a good soaking. This may be the final watering, but don't count on it. Keep your hoses handy and water during any prolonged dry spells this winter.

When the leaves begin to fall there is always the question of raking. A few loose leaves will not hurt a lawn, but heavy mats of them will. Raking is good exercise and the leaves accumulated this way make excellent compost. (See article on page 295.)

Remembering last September and the heavy snow, it's time to take a close look at our trees. They have made excellent growth this season, much of it is at the extremities where it adds leverage to snow or ice. Corrective pruning can do much to eliminate the chances of storm breakage. Have a competent arborist check your trees now for poor structure and other defects. While he is checking he can also advise you on the advisability of dormant spraying for the control of scale insects.

Now is the time to plan, buy and plant the spring flowering bulbs such as tulip, hyacinth, narcissus, and crocus. You'll find an article on page 268 dealing with their care.

Don't forget your tools; clean and repair them before you store them for the winter. A light coating of oil on the metal parts will prevent them from rusting. If you store your hoses where they will freeze, be sure to drain them.

Our last suggestion is really an invitation. We would like to invite you to visit us at the Botanic Gardens House and become acquainted with our wonderful Helen Fowler Library. It's chock full of good gardening books that can bring gardening pleasures into your homes during the bleak winter days ahead.

—PAT
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