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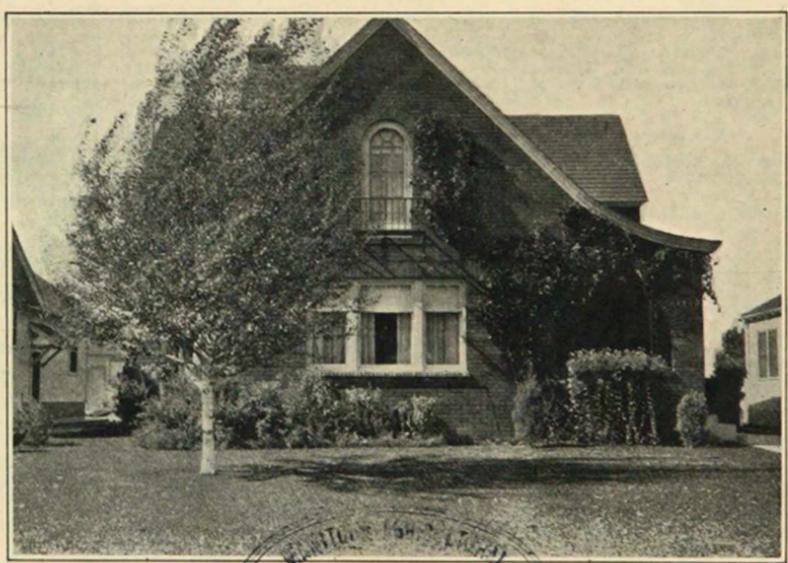
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Bulletin 374

July, 1931

IMPROVEMENT OF HOME GROUNDS IN COLORADO

BY GEORGE BEACH



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**COLORADO PUBLICATIONS ON SUBJECTS RELATED TO
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Station Bulletin 357—The Home Vegetable Garden.

Station Bulletin 328—Hotbeds and Coldframes.

Station Bulletin 351—Some Common Diseases of Ornamental Plants.

Station Bulletin 310—Common Weeds of Colorado Lawns.

Extension Bulletin 300-A—Small Fruits.

Extension Bulletin 275-A—Trees for Eastern Colorado.

Extension Bulletin 303-A — Lawns—Planting and Maintenance in
Colorado.

Special Booklet—Evergreens of Colorado (B. O. Longyear) 25 cents.

Colorado Extension Cir. No. 6—The Farm Nursery for Forest Trees.

IMPROVEMENT OF HOME GROUNDS IN COLORADO

By George Beach*

Many Colorado home grounds are unplanted and very few are completely planted. Hence the term "Improvement of Home Grounds" is equally applicable to the cases of those who have made a start in giving their homes an appropriate setting and those who "simply haven't got around to it yet."

The planting of lawn, flowers, trees and shrubs on the home grounds is done primarily to give a home an appropriate setting. In planning an improvement, garden areas should be treated as parts of the home itself—as the outdoor living rooms which they really are.

A man is often judged by his home, whether he rents or owns it and he can ill afford to neglect doing everything in his power to give it an attractive setting. Aside from making a favorable impression, and many times more important, is the fact that "it's not a home 'till it's planted." A child will remember, the balance of his life, the birthday tree you planted for no one but him. The more pleasant and comfortable home is made, the less desire young people will have to leave. By planting to make home more homelike, you automatically discharge a public duty to your community while you are enhancing the financial value of the property by a sum which grows each year to proportions far beyond your initial investment.

"Landscaping" has an expensive sound but the amount of stock necessary to plant a small property tastefully will surprise you by its cheapness.

Planning

Whatever your landscape problem is, first make a pencil sketch of the grounds. It's much easier to erase than transplant, and, too, if conditions do not permit all the work to be done in a single season, the plan you've made connects each year's efforts and prevents the meaningless effect often obtained otherwise.

*Acknowledgment is hereby given to Professor R. V. Lott, head of horticultural department, Mississippi A. and M. College, formerly of this station, for much valuable assistance in preparing this bulletin.

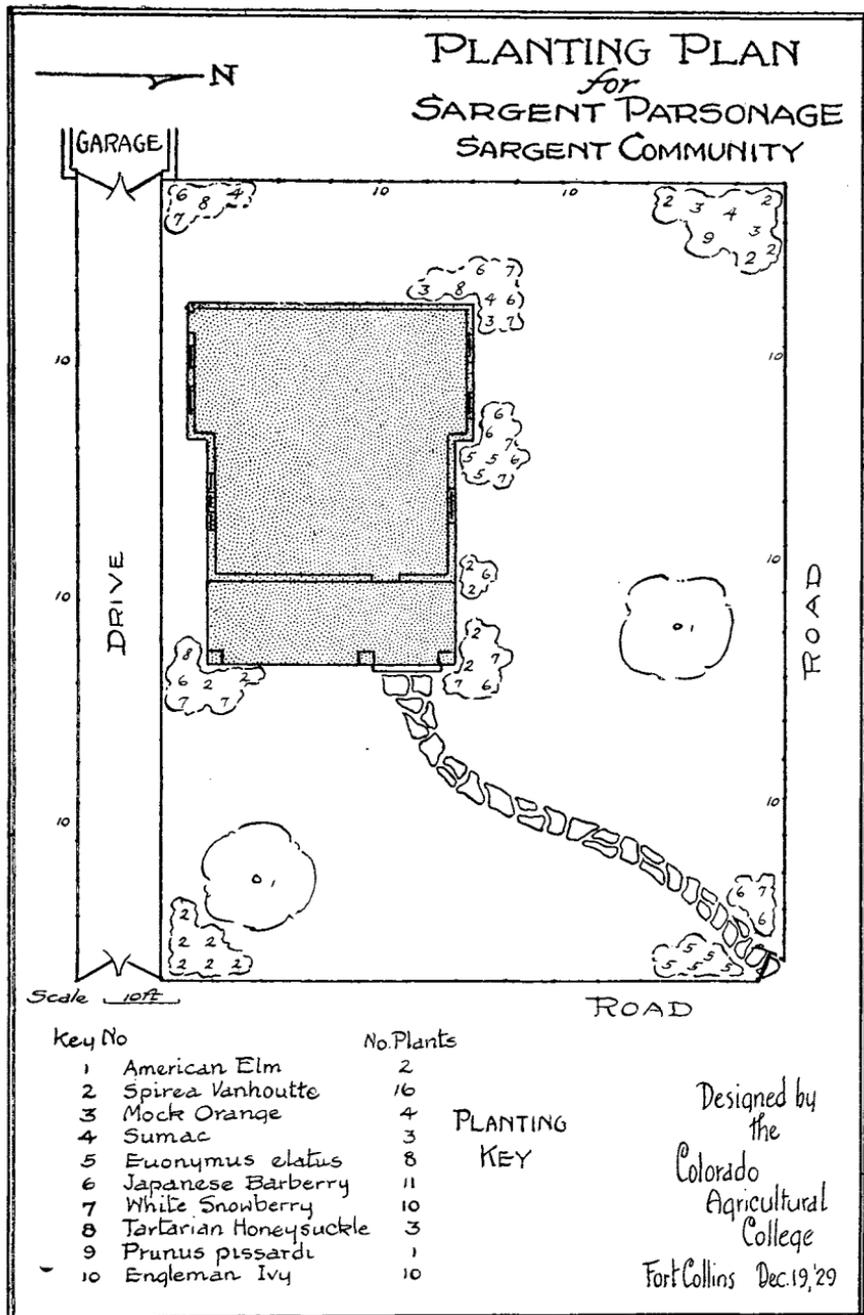


Figure 1.—Simple plan for planting a corner lot. A figure designates the location and kind of each plant. The locations of doors and windows are shown in the floor plan to help in planning height of bushes to use near them. Stepping stones make a slightly curved path to corner entrance.

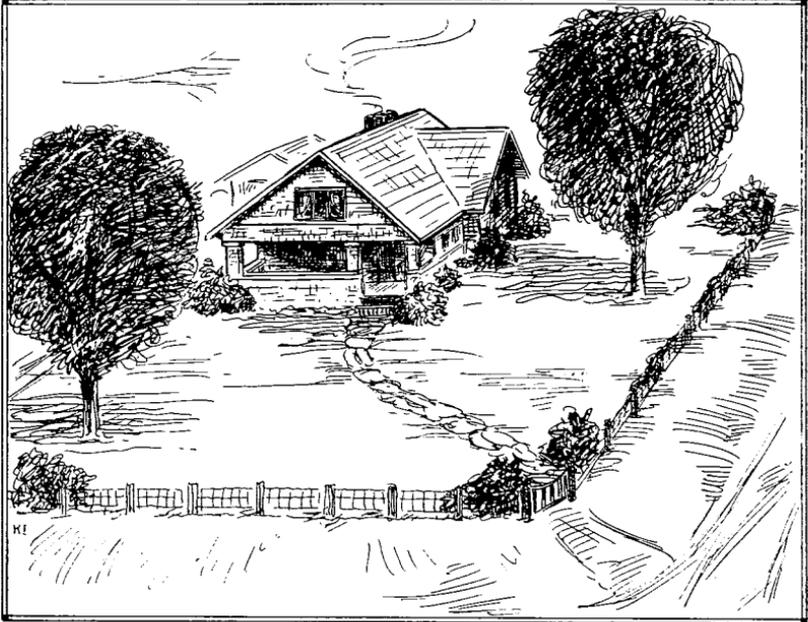
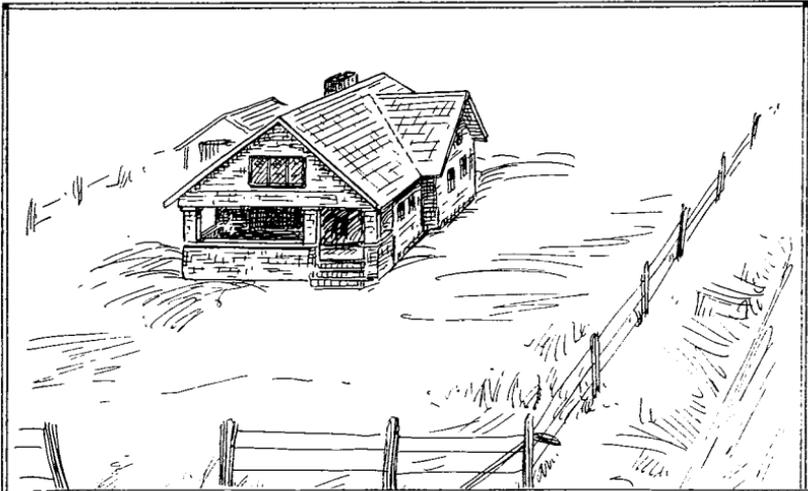


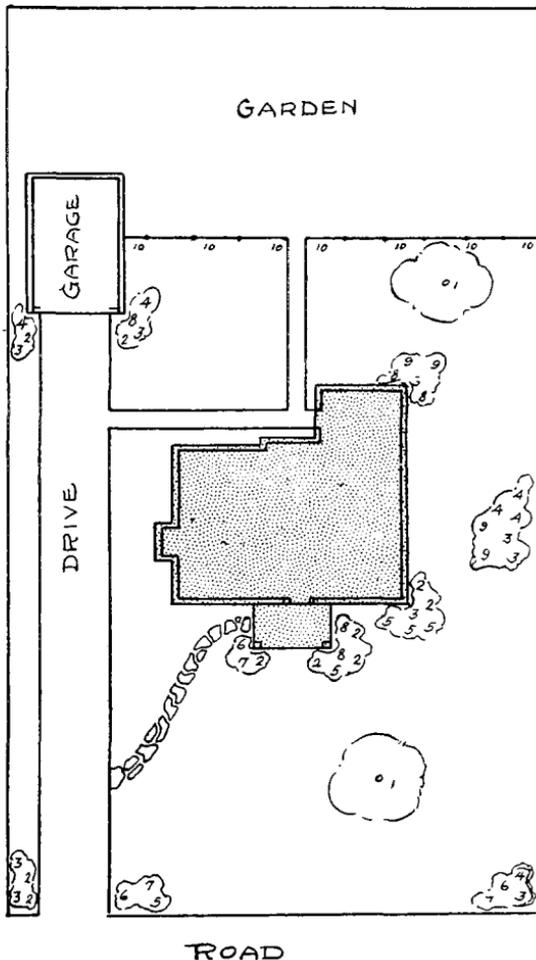
Figure 2.—Sketch of grounds planned in Figure 1.

PLANTING PLAN

for

MRS. O.W. KING

MONTROSE, COLORADO



Planting Key

Key No.	No. Plants
1 American Elm	2
2 Spirea Vanhoutte	12
3 Mock Orange	9
4 Sumac	6
5 Euonymus elatus	5
6 Japanese Barberry	5
7 White Snowberry	5
8 Tartarian Honeysuckle	5
9 Prunus pissardi	4
10 Engelmann Ivy	7

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ROAD

Scale  10 FE.

Designed by the
Colorado Agricultural College
Fort Collins, Col. Dec 18, 1929

Figure 3.—Simple plan for planting an inside lot. Further elaboration might include a small flower garden, play area or rockery on the south side or in the rear.

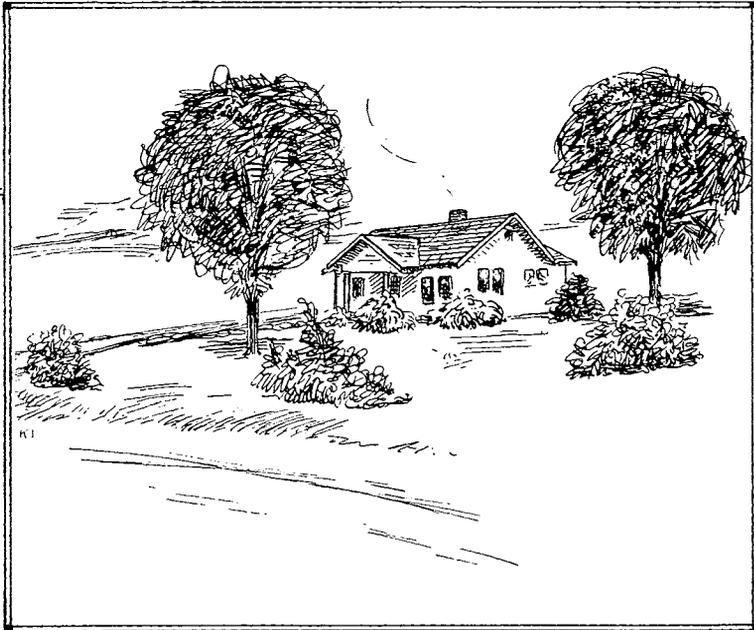
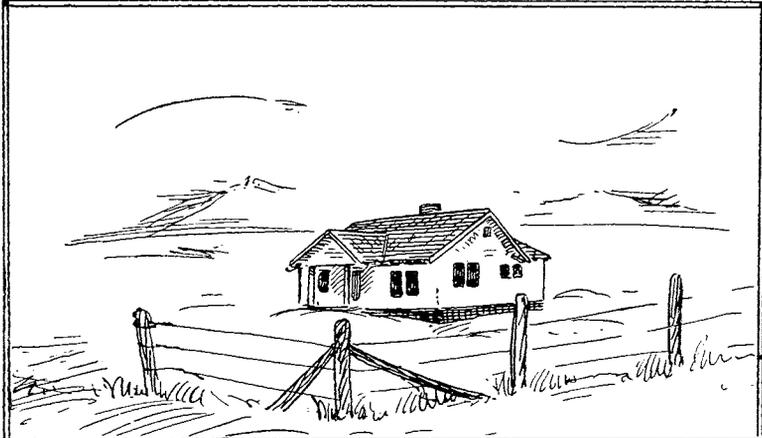


Figure 4.—Sketch of grounds planned in Figure 3.

Figure 1 shows a simple planting plan for a corner lot. This particular plan was made for a rural development but the same principles apply to a corner lot in the city with the possible exception of a fence entirely surrounding the lot. Figures on the plan show the exact location of each plant and the kind to be used is listed under the same number in the "Planting Key." The irregular outline surrounding a group of figures indicates the area to be spaded for a shrub group. Trees at the front and side are indicated by irregular circles, approximating the spread of branches.

Figure 3 is another simple plan; this one an inside lot. The shrub plantings at the southwest corner are so arranged as to practically screen the rear areas from the front view. Such an arrangement offers an excellent opportunity for future elaboration of the plan. A small formal garden, play area or rockery could well be located in the private area created at the southeast corner of the house by the shrub groups in front.

No great amount of time is required in making such a plan as one of these and the effort is well repaid in future satisfaction.

City homes as a general rule are more carefully planted and cared for than farm homes, but in planning a planting, the farm home usually has distinct advantages over a similar home in the city, being set back farther from the road and less hemmed in by other buildings. Very small lots often dwarf the appearance of the house.

After having made a sketch of your grounds, showing buildings and fences, you will notice a necessity for planting in certain places that wasn't apparent to you before making your plan, and often, likewise, the uselessness of some already existing planting will be revealed. Simply transplanting a few shrubs or trees, or changing a walk or drive, will often make a decided improvement.

Things to be considered in any plan for the planting of home grounds are the desirability of outlook, the possibility of protection from wind, and adequate drainage. Perhaps all these requirements cannot be perfectly satisfied in any one case but, in general, in a cool climate like Colorado's, the rooms to be most used will be built on the sunny side of the house, and the views most desirable will be open to the most-used rooms as nearly as is consistent with other conditions. What wind shelter is available will be used and the best possible drainage for the grounds in the immediate vicinity of the building should be provided.

If the development is a new one and a site for building must be decided upon, the problem is usually less complicated in the city,

where only house and garage are to be located on a prescribed size of lot, than in the country where the business of farming demands barns, granaries and sheds near the house, and the size of the home grounds is largely at the discretion of the builder. Farmers' Bulletin 1132, a 24-page illustrated booklet, "Planning the Farmstead," obtained from your congressman, will be useful in deciding on a desirable farm layout.

Style

As in other forms of architecture, there are styles in landscape design. Plantings are classified as informal and formal; within each of which is included styles that are characteristic of certain climates or communities or even certain individuals.

Informal design, often called the "natural style," is characterized by irregularly curved lines. This type of design conforms most nearly to the arrangement of trees and shrubs as we find them in nature; is the most economical in first cost and easiest to maintain. This style in general is best adapted to the needs of the farm or small city home.

Formal developments are characterized by symmetrical or balanced areas of geometrical exactness, carefully planned grades and terraces, clipped hedges, statuary and other architectural embellishment. Pure forms of this style are usually confined to large estates and park developments.

Features of both informal and formal treatments, however, may often be used advantageously in a single plan. While clipped hedges and garden furniture are formal by nature, they have their places in an informal plan. These features of course add to the first cost and the time required for proper maintenance and should only be used where there is assurance of time for their proper care. Unkempt formal features become unsightly much more quickly than do the informal ones.

In the original plan it is well to select a suitable area for a formal garden and arrange the first planting so as to give it privacy, leaving the area in open lawn until experience with the time available for garden maintenance warrants further elaboration of the original plan.

Only general rules governing the use of style in design may be given since each planting is a problem in itself and the successful one is that which best suits the working and living conditions of the family it serves.

Comfort, convenience, appropriateness and attractiveness are cardinal virtues in planning any planting and only a judicious satisfaction of each condition will insure success.

Walks—Drives—Areas

There should be as few walks and drives as possible; large unbroken areas are desirable. Treating them as a necessary evil, walks and drives should be made inconspicuous. The use of dark-colored brick, stepping stones or concrete in shades subdued with lampblack or other mortar color, are suggestions. It is well to avoid straight lines, and walks paralleling drives, wherever possible. There is, of course, the notable exception of very small areas in which curved walks are simply an affectation. In such small yards, straight walks are best, even tho they bisect the entire front lawn. In some cases, one tread of a ribbon drive may be made to serve as a walk for part or all the distance to the front entrance. Keeping lawn and garden areas as nearly intact as possible is the main objective in planning walks and drives, and, incidentally, such planning adds attractiveness and makes maintenance easier.

In curving walks and drives, the feature of directness should be preserved. A pleasant curve can often be produced by a deviation of no more than the width of the drive. Curves, to avoid being meaningless, should be given a reason for existence. This reason is usually furnished by a group of shrubs or evergreens, or a tree, on comparatively flat land, or by an intervening hill or gulch in a farmstead plan in rolling country. On hilly land, of course, considerations of grade enter in and each case has its own best solution.

Some attractive sort of gateway is a problem in farmstead design; less often in the city, where front fences are usually unnecessary and curb, parking and sidewalk make the approach. The entrance to a drive may be properly framed either by the use of masonry or plant materials. If masonry is used, its inherent formality should be subdued as much as possible by construction; or supplemented by use of vines or shrubbery, unless the pretentious nature of house and grounds warrants formal treatment of the entrance. Plant groups are much less expensive than masonry and may be used either formally or informally.

Areas.—The size and shape of garden and lawn areas is largely determined at building time when house, garage, walks and drives are located on the lot; subsequent changes are more or less difficult. Where space is limited, the areas for lawn and garden are often made unnecessarily small by placing the house squarely in the center of the lot when it might as well have been placed to one side of the center, farther back, or both.

An inconspicuous location for the garage is an advantage in the

final effect. The garage built into the house is rapidly finding favor for this reason as well as that of providing warm storage in winter.

Many plans could best utilize a limited garden space by providing garage entrance at the rear instead of running a drive from the front, the entire length of the lot. Where it cannot be placed out of sight from the front, the garage should be near the house instead of on the rear of the lot with the consequent extra expense for drive construction and sacrifice of space otherwise available behind the garage.

In most plans it is desirable to have one part of the grounds for the family alone, which is not directly open to the public view as is the area between the house front and street. Some more or less substantial division is necessary to make these public and private areas distinctly separate parts of the plan, just as a wall and door, or colonnade makes the division between a reception room and living room.

Aside from the public area in front of the house and the private area for family and friends, there is the service area providing space for deliveries, and for those kitchen accessories not usually kept indoors. Normal use of the service area should not necessitate trespassing either of the other areas.

Most plans should include a play area which contains simply a sand pile in a shady spot or some more elaborate play apparatus.

Division of Areas.—Some more or less substantial material is needed to separate the areas mentioned above. The location of

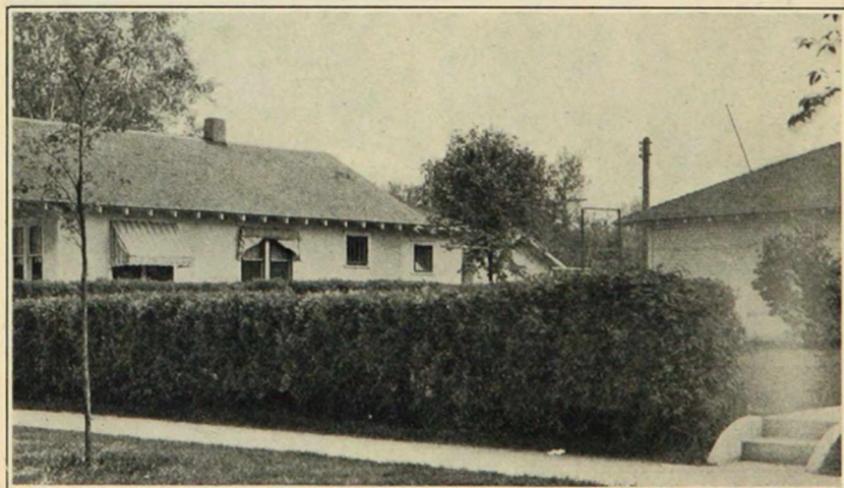


Figure 5.—Caragana used as a trimmed hedge.

buildings sometimes accomplishes or helps to accomplish this purpose. Walls, fences or lattice may be used to make a division or it may be done partially or entirely by the use of plant materials.

Where plants are used for this purpose, shrubs usually form the body of the planting, tho it is often desirable to use small trees or perennials in conjunction. Hedges, both the clipped formal type (Figure 5) and the unclipped, informal type (Figure 6) can be used for a division planting. Or an informal group of different kinds of bushes as shown in Figure 7 will accomplish the purpose.

If the division planting is to be rather tall, the use of small trees with the shrubs will help. Small bushes or perennials will add a pleasing finish to the front of the taller bushes used to form the body of the planting, by covering their more or less bare lower stems. Such a planting is not so effective as a screen in winter as when in full foliage; but it definitely divides the areas even then. And too, when foliage has fallen, the garden season is over, and the screen is less necessary than during summer

In this or any other kind of shrub group, it is essential to greatest success, that the ground between bushes be spaded and kept cultivated so as to be weed and grass-free. This not only makes the group much more attractive, and insures a maximum of growth, but makes maintenance of the adjoining lawn much easier by removing the necessity of mowing between bushes.

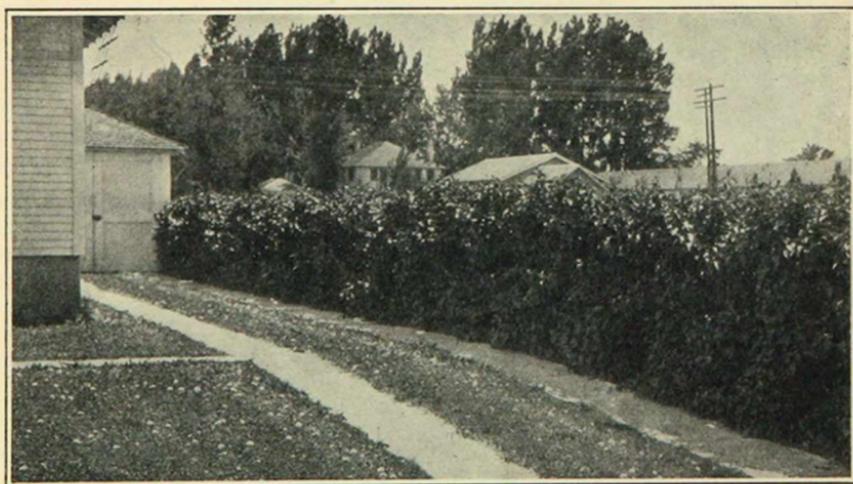


Figure 6.—Untrimmed hedge of Common Lilac.

Lawn

Lawn is the 'ground cover in almost all ornamental plantings—the background upon which shrubs and trees are arrayed. A good lawn is necessary to display other planting to best advantage. Dandelions are the most discouraging factor in Colorado lawns, but they should not be given a greater share of the blame for an untidy lawn than is their due. If grass is kept growing vigorously, mowed often and neatly edged, a good appearance can be made in spite of a great many dandelions.

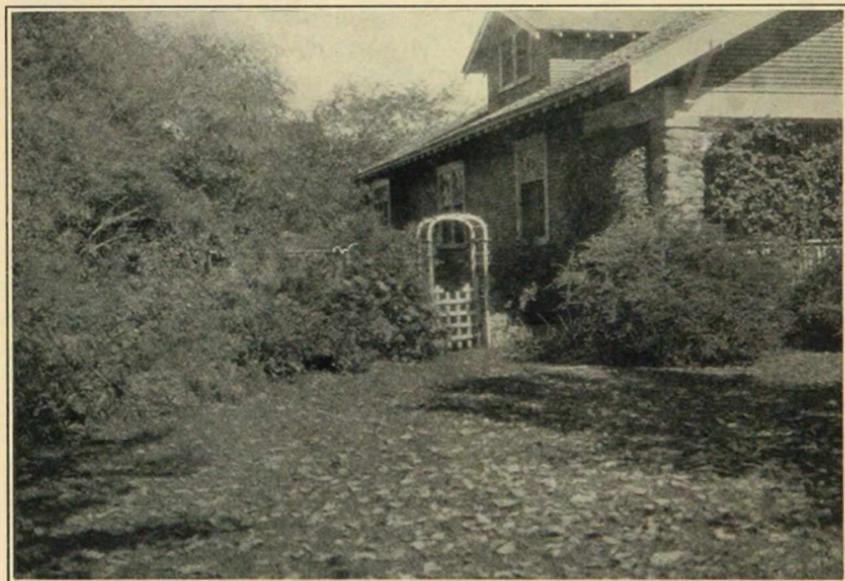


Figure 7.—Shrub planting for division of areas. Private area at side of house completely screened from view of public area.

Lawn-making and maintenance in Colorado is discussed in Bulletin 303-A; available without cost upon application to the Colorado Agricultural College Extension Service, Fort Collins.

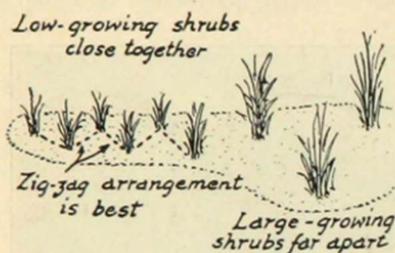
"Common Weeds in Colorado Lawns," Bulletin 310 of the Colorado Experiment Station, is a well-illustrated pamphlet giving life cycles and control measures for the common lawn weeds.

Foundation Planting

The planting of shrubs at corners and in angles of a building or along its walls, is commonly called foundation planting. Figures

1 and 2 show how such groups are designated on a planting plan. As the object of this type of planting is to relieve the angularity and to cover objectionable masonry in foundations, the amount of planting necessary, even on two houses of the same dimensions, depends on the character of foundation.

Where the foundation is architecturally correct, it is better to confine planting to groups and leave spaces where foundation is visible. (See cover illustration). These groups may consist of tall, medium and low bushes, arranged in a zigzag fashion in a bed of irregularly curved outline. The cover illustration is a good example of foundation planting.



The group at the left corner of the house makes an excellent background for spring bulbs and annual plants as well as being an effective foundation planting in itself.

Where the foundation is of unfinished concrete or is otherwise unsightly, a continuous planting is advisable to bridge the gap between the ground and more attractive walls. In being continuous it need not have a monotonous sameness; the topline can be higher at the wall spaces and low under windows, and angles can be

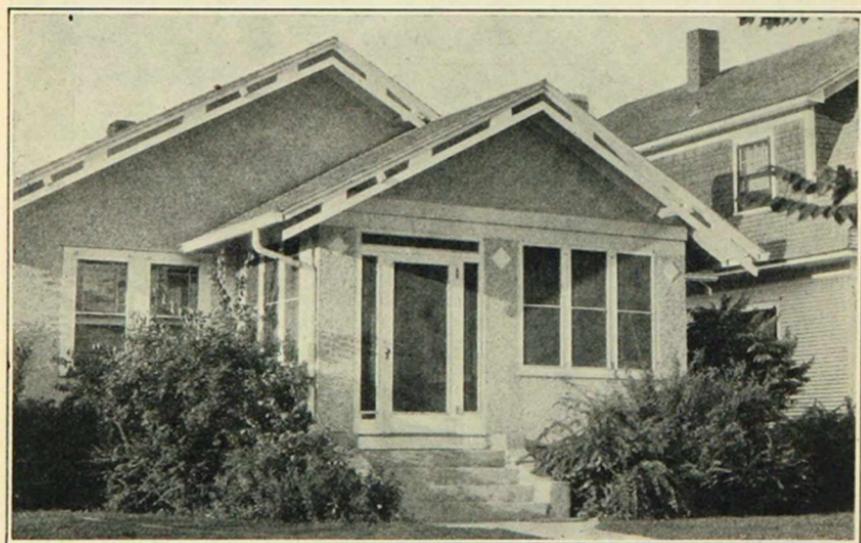


Figure 8.—Continuous foundation planting to hide an unsightly foundation.

rounded off by a staggered arrangement of bushes. Figure 8 illustrates the use of a continuous planting to cover a rather unsightly foundation. In the angle between house and porch the planting appears rather overcrowded. Unless it is desirable to shade these front windows, lower bushes should be used in place of the tall ones.

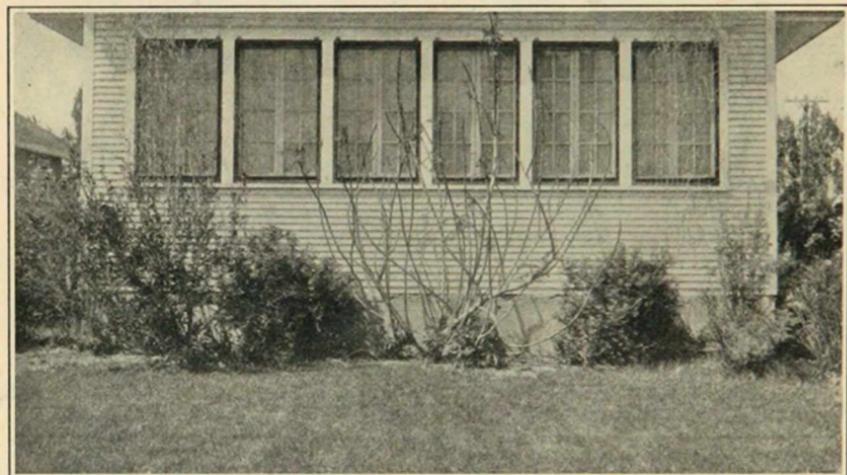


Figure 9.—Sumac in center too tall for its location.

Figure 9 shows another foundation requiring a continuous planting. In this illustration, the staghorn sumac in the center has outgrown its location; lower, more compact shrubs would better hide this foundation.

Bushes with the finer foliage and stems, such as the spireas, snowberry and Japanese barberry, are usually used in foundation plantings.

Height of bushes is an important consideration. The simple truth that bushes grow, should not be neglected—too often the ultimate height of a bush is not considered at planting time. The height of the tallest shrubs used in a foundation planting should not exceed two-thirds the distance from the ground to the eaves. Some shrubs which answer their purpose well when small, eventually become too large. They should either be avoided in the first place, or moved, after they outgrow the location, to a background requiring large bushes. The honeysuckle bush at the right of the steps in Figure 10 is such a bush.

If a foundation planting is to extend under low-silled windows, use low bushes like snowberry or Japanese barberry; some kinds of the spireas will do as well. Tall bushes are only used in foundation

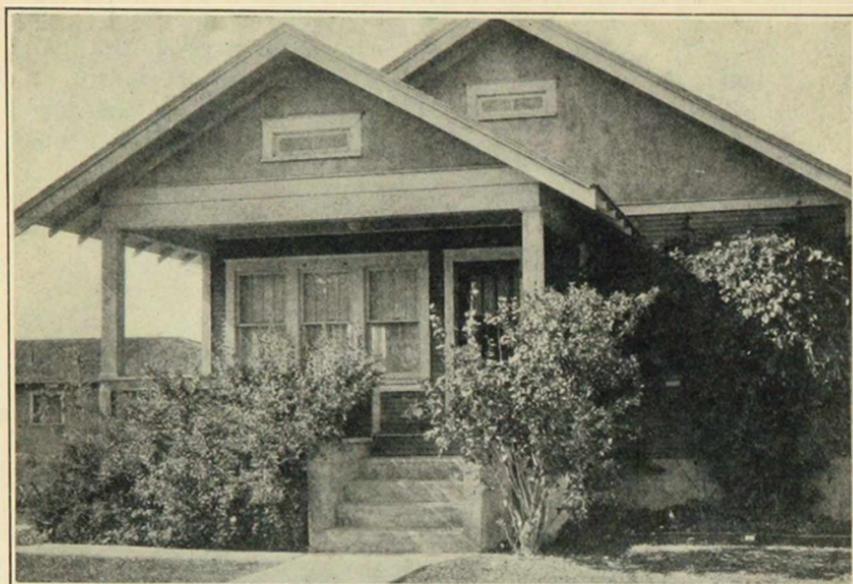


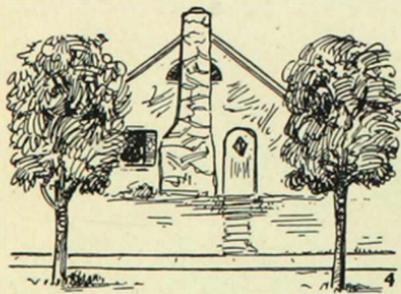
Figure 10.—Honeysuckle bush at right of steps poorly placed. Good planting at the left.

planting when large wall spaces or large unornamented chimneys are to be covered. Medium height bushes, such as most of the spireas find many uses in foundation planting under high windows, at building and porch corners and for groups on moderate sized wall spaces.

In some places, a walk near the house makes shrub planting undesirable because of branches lopping over the walk. In such places a vine, a climbing rose or small perennials can usually be used to accomplish the purpose.

“Framing” Trees

The term “framing trees” is often used in referring to those planted in front of the house and so located as to literally frame the picture made by the house when viewed squarely from the front.



Only two trees are necessary for this feature on small properties. These are usually planted the same distance in front of the house and a little farther apart than the house is wide. As viewed, then, squarely from the front, a “frame” for the house is formed by tree trunks on either side, lawn beneath and tree tops arching above.

On a city lot the framing trees are usually planted in the parking. On the farm they are correspondingly located toward the front of the yard and from 25 to 75 feet from the house, depending on the size of yard.

All trees in front of a house need not necessarily be framing trees, and in some cases the direction of approach to the house necessitates a different arrangement to accomplish the same purpose; but in general a pair of trees planted to frame the most important view of the house front is a desirable addition.

In Figure 1 the two American Elms (marked "1" on the plan) are framing trees. Tho they are not equidistant from the house front, they do frame the picture because of the direction of approach.

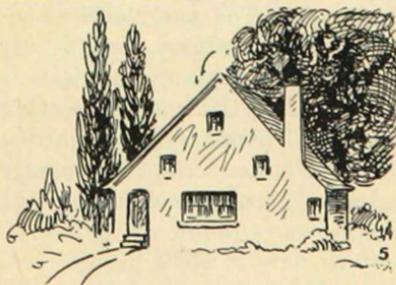
Specimen Trees

A specimen is a tree that is given prominence by its location or by the contrast of its form or color to the surroundings. A specimen should be a particularly fine representative of its kind.

In locating a specimen tree, particularly a small one, a place opposite a bay or promontory in the outline formed by a shrub group or perennial border is a good one. The larger specimen trees are often simply planted out in a large open lawn where they will be the sole center of attraction. The birch tree in the left foreground of the cover illustration is a well-located specimen tree.

Background Trees

Trees are often planted behind a house to contrast or accent the architecture; to shut out an objectionable view or to give the house the appearance of being nestled in foliage. If the house is a low one with low pitched roof, a group of three to five Lombardy or Bolleana poplars (Figures 13 and 14) to one side and at the rear will make a striking contrast and still not shut out the distant view. If this is not a desirable view, however, it can be screened by planting trees in a solid row with shrubs to fill the space between lower branches and the ground. Sometimes a rounded or bushy-topped tree, like elm, ash or maple,



is used in the same background with the tall, slender poplars, to contrast foliage forms with each other.

If the trees are to furnish accent for the type of architecture, use slender tree groups with a house of high pitched gables (Figure 13); and bushy-topped trees with a flat-roofed house.

Garden Accessories

Trees are the framework of a landscape design; shrubbery "ties" the house to the grounds, defines boundaries and forms backgrounds, and lawn completes the whole.

A house on a lot, devoid of any other ornament, is like the chassis of a car—the necessities are there and it will work without anything else. Home grounds properly planted with trees, shrubs and lawn are comparable to the car with standard equipment—it is complete in itself, but there is still room for the addition of accessories, of which some seem necessary to one person, others to another.

Among garden accessories are: Pools, pergolas, lattice fences, bird baths, gazing globes, statuary and garden furniture.

When pools are included in a small home garden it is usually to accommodate gold fish, water lilies or both. The pool may be formal, that is, of strict, geometrical design; or informal, having an irregularly curved outline and perhaps native rocks forming the edge of the cement basin. The kind of pool should be appropriate for its surroundings; formal if in a formal setting, otherwise informal or naturalistic.

Pergolas are used for background, for division of large areas and to connect separate features of the landscape. The pergola is essentially a formal feature and, like all other formal features, should bear definite relation to one or more of the axes of the plan, since axis is the essence of all formal plans. Axes, briefly, are the lines connecting important garden features and the house; or harmonizing the garden with the architecture. There are major and minor axes. The center lines of a house are sometimes the major axes. A minor axis might be the center line of a vista from an important window of the house.

The more elaborate garden furniture and statuary are usually only used in a formal plan where they, like the pergola, are definitely related to an axis of the scheme.

Lattice fence, much less pretentious than the pergola, is used for much the same purpose as the pergola. Lattice, and pergola as well, is usually painted white, dark green or dark brown, so as not to "clash" severely with foliage forms.

Bird baths are often included in the informal plan and should be located in some more or less secluded spot, such as a bay in a shrub group. Excessive seclusion, which provides lurking places for cats, however, should be avoided.

Hardiness

Before embarking upon a discussion of specific kinds of trees and shrubs for ornamental planting in Colorado, a few words on hardiness are in order.

It seems very logical to the uninitiated to assume that a definite list of plants that will flourish in Colorado can be made. Such a list would save poring over everything catalogued in search of hardy varieties. But when the fact is considered that the number of frost-free days per year in Colorado varies from 59 to 184, it is evident that "Colorado climate" is not a specific term. Nor is the degree of cold a given plant will endure a reliable index of its hardiness. Some plants thrive at cold, northern temperatures which would not survive a moderate winter farther south. Such plants winter well under a blanket of snow thru severe cold, but could not live thru a less-intense cold without the snow cover.

Hardiness is such a variable factor that even in the same yard differences of exposure, soil character and individual vitality play larger parts than actual degrees of cold.

With these points in mind, one has a better conception of what is meant by, and what to expect from plants described as "hardy," "half-hardy" and "not hardy."

Related to the subject of hardiness is the preparation for, and the care of plants in winter. Occasionally the "hardy" plants winter kill and this may sometimes be averted.

Rapid wood-growth in the fall and the consequent failure of the wood to ripen is one of the common causes of winter killing. It cannot always be avoided, as when weather conditions prolong the growing season and then suddenly plunge into winter. But in normal

seasons, most trees and shrubs benefit from a withholding of irrigation in late summer. After growth has practically ceased, however, and before ground freezes, a thoro irrigation is in order so that roots may "go into the winter wet." With these ideal conditions, winter watering is unnecessary even in very dry winters. In fact, it is usually difficult to get much water to the roots in winter because of frost in the ground which hinders percolation and causes most of it to run off the surface.

The trimming of trees and shrubs mentioned under "pruning" will help to keep them in the healthy condition that resists injury which might otherwise cause winter-killing.

The covering of such plants as roses and raspberries is discussed under roses. This precaution is a good one to take with most "half hardy" shrubs.

A soil well supplied with humus is a good insulator for the damage done by heaving from frost. If all the tree leaves shed on our lawns were composted and returned to our garden soils, another advance would be made in minimizing losses by winter-killing.

Nomenclature

Knowing plants by name seems difficult at the start because some plants go by so many names and most have at least one common name as well as a botanical name.

Someone has drawn the following parallelism between plant and human names which is appropriate here. A boy comes into the world christened "John Wentworth Jones." His school chums know him as "Skinny;" at college he is "Fat Jones," at the office they call him "J. W.," and at home his wife calls him "John." Suppose a college chum and one from the office are discussing their mutual friend; the college man has never heard of "J. W." nor does the office friend know "Fat Jones," yet John Wentworth Jones is familiar to both.

It is interesting to know nicknames and common names, but to be sure of future recognition, one should learn botanical names as well. Heretofore there has been some confusion even among botanical names and their usage in the trade, but we now have "Standardized Plant Names," by the American Joint Committee on Horticultural

Nomenclature, which recommendations are followed in this bulletin.

Only recommended common names are given for a number of plants mentioned hereinafter, which is in accordance with the committee recommendation for horticultural varieties of a species.

Trees

In small yards where trees are needed but space does not permit large growing ones, there are small and medium-sized kinds.

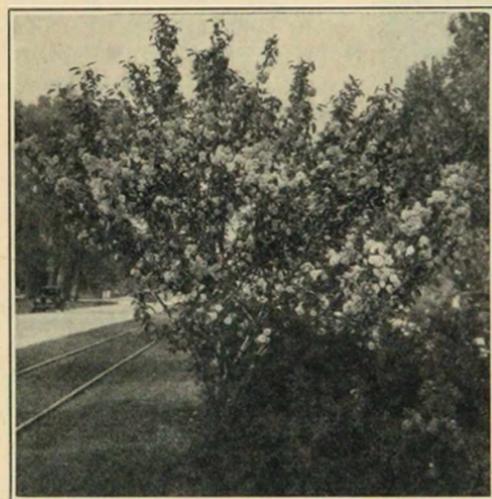


Figure 11.—Bechtel Crab. A fine small tree.

Bechtel Crab (*Malus*) (Figure 11) is a good small tree. It has the general characteristics of the apple, except that it has large double blossoms in spring instead of the common single ones. Another of similar character and bark is American Mountain-ash (*Sorbus americana*). This is a small tree too, tho somewhat larger than the flowering crab; has pinnate leaves and bears clusters of white blossoms in summer followed by red berries that persist all winter, birds permitting. It is often used

as a specimen ("Specimen Trees," Page 19) and makes a good companion by contrast to the European White Birch (*Betula alba*) (see cover); another good medium-sized specimen. There are weeping forms of both Mountain-ash and Birch as well as ones with upright branches.

Horsechestnut (*Aesculus hippocastanum*), sometimes called Buckeye, is a good medium-sized tree. It is particularly interesting for its large leaf buds and flower clusters in spring, followed by odd fruits.

Russian-olive (*Elaeagnus angustifolia*) (Figure 12) and Siberian Pea-tree (*Caragana arborescens*), the hedge plant in Figure 5, are classed both as tall shrubs and small trees. When trained to a single trunk they make good small trees. Both will withstand considerable drought and are recommended for dryland planting as well as irrigated ornamentals.



Figure 12.—Russian-olive. A shrubby tree with silvery leaves, shiny bark, very fragrant, inconspicuous flowers, and inedible, silvery-colored fruits.

Russian-olive has a silvery-green foliage, an inconspicuous small bloom and an all-pervading fragrance that makes it deserving of a place in most plantings if for no other reason. Bark on the older wood is shiny, greenish-brown, while twigs are silvery color and thorny. The foliage color contrasts well with most other leaves making Russian-olive a good background plant.

The Siberian Pea-tree has a small, yellow, pea-shaped flower, blooming in early summer, with leguminous foliage and gray-green bark. Like Russian-olive, this plant is often

used for tall hedges.

The Siberian Apricot (*Prunus armeniaca sibirica*) altho it seldom produces fruit, is reported* as a good Eastern Colorado lawn tree; where it appears to be hardy even on non-irrigated land. Foliage is full and dark green.

The above-named small trees find a useful place in planting on rather small grounds where the use of larger trees is or should be prohibitive because of insufficient room for their complete development.

Probably the most popular of the larger shade trees is elm. American Elm (*Ulmus americana*) was the only generally known species until the recent advent of the much more rapid growing Dwarf Asiatic (commonly known as Chinese) Elm (*Ulmus pumila*). A number of other varieties such as English, Cork and Moline Elm will do equally well.

Chinese Elm has not been grown in Colorado long enough to warrant any statement as to its length of life, but it is a very rapid grower in its first few years at any rate; making a fine low, globe-shaped tree.

*Prof. W. J. Morrill.

Elms as a class sometimes suffer breakage from early wet snows in fall. Chinese Elm is somewhat more susceptible to this damage because of its characteristic habit of retaining foliage late into the fall.

Hackberry (*Celtis occidentalis*) is a slow-growing but very reliable shade tree. It is similar to elm in many respects and often mistaken for elm.

White and Green Ash (*Fraxinus*) are fine shade trees where the oyster-shell scale peculiar to the ash tree is not present.

Silver Maple (*Acer dasycarpum*) has been in common use for shade for some time. Other good maples that are slower growing and of harder wood are Norway Maple (*A. platanoides*) and the Red Schwedler Maple.

Schwedler Maple is a horticultural variety of *Acer platanoides*, having dark, bronze-red leaves, but otherwise very closely resembling Norway Maple.

American Linden (*Tilia americana*) is another good shade tree. It is a tall, smooth-barked tree with heart-shaped leaves.

Common Honeylocust (*Gleditsia triacanthos*) is used in dryland plantings as well as in general landscape work because of its ability to

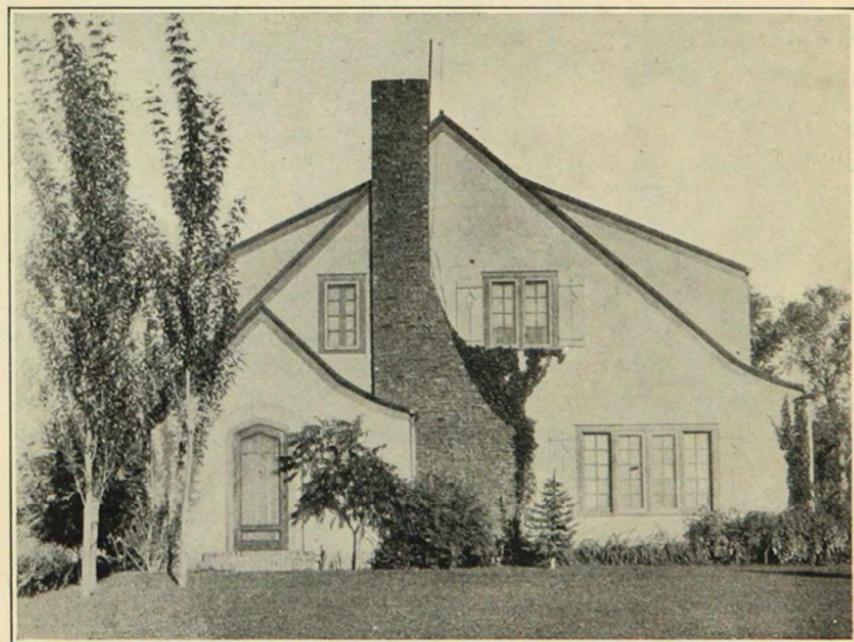


Figure 13.—Belleana Poplars in foreground.

withstand considerable drouth. This locust has an olive-green, shiny bark and stout, branched thorns. It is not subject to the ravages of the locust borer that has killed most of our Common Locust (*Robinia pseudoacacia*).

Sargent Cottonwood (*Populus sargentii*) and Carolina Poplar are considered nuisances by many, and better as cordwood than as ornamentals, but they have their places. Where shade is an immediate necessity, they can be used to good advantage by alternating them with slower-growing kinds, with a view to removing them as soon as possible. Where Cottonwood (of more spreading

habit than Carolina Poplar) is used, only the "cottonless" trees (those with staminate flowers) should be planted in order to avoid the nuisance of flying cotton in spring.

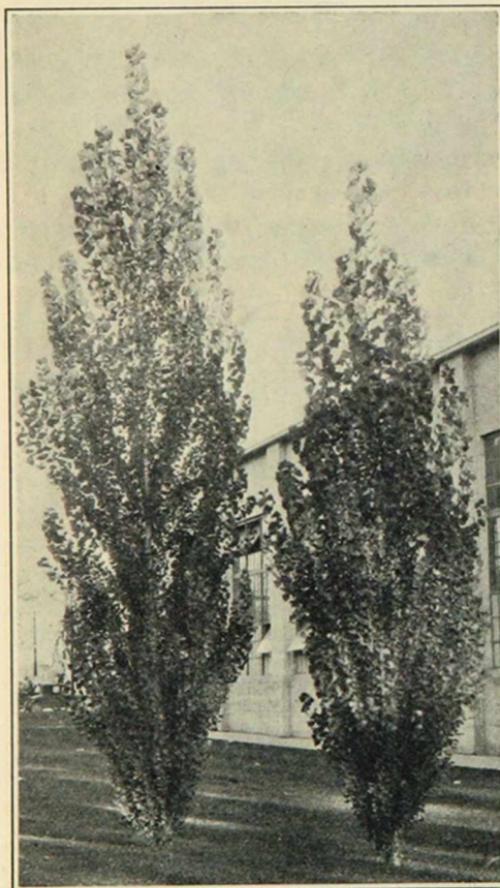


Figure 14.—Lombardy Poplars. Mature trees 5 to 6 feet apart are not too close. Spires of green towering above a house may be had quickly with Lombardys and Bolleanas.

Lombardy Poplar (*Populus*) (Figure 14) is a very slender, tall tree. It can be planted 5 to 6 feet apart in windbreaks and similar close groupings, because of its severe upright habit.

Bolleana Poplar (*P. bolleana*) (Figure 13) is similar in habit to Lombardy and a trifle more spreading. It is used in the same type of planting and has a more ornamental bark and leaf, the bark being smooth and of a sage-green color with a gray bloom. The leaf is shiny green on top and silvery gray on the under side. Hardiness of Bolleana in Colorado is equal to if not greater than that of Lombardy.

Evergreens

Evergreens are an important item on the list of plant materials used in landscape work. On large and small areas alike there are many places where the total effect from planting is benefited by the use of these plants which have green foliage the year round. They are more expensive as a class than deciduous plants, but considering the fact that ornamentals are purchased largely for their effect while in leaf, evergreens are three times as valuable in this respect, since they are in leaf three times as long in a year, as are the deciduous plants. And even while both are in leaf, there are characters of

evergreens for which other plants cannot be substituted.

One important use of the evergreen, such as Western Yellow Pine, Juniper and Spruce, is in planting windbreaks or shelterbelts. Groups of three to five or more are interesting in corners of a yard, or in the background planting. Where evergreen trees are used they should be toward the sides and back of the property, using dwarfs, such as Mugho Pine and Savin in foundation plantings and wherever the house front would be unduly obscured by tree forms.

Silver Colorado Spruce or Blue Colorado Spruce, as it is commonly called, does not require description; since it is the crowning glory of Colorado's mountains and is familiar to most residents. When this tree is used in groups the silvery cast of the needles may be

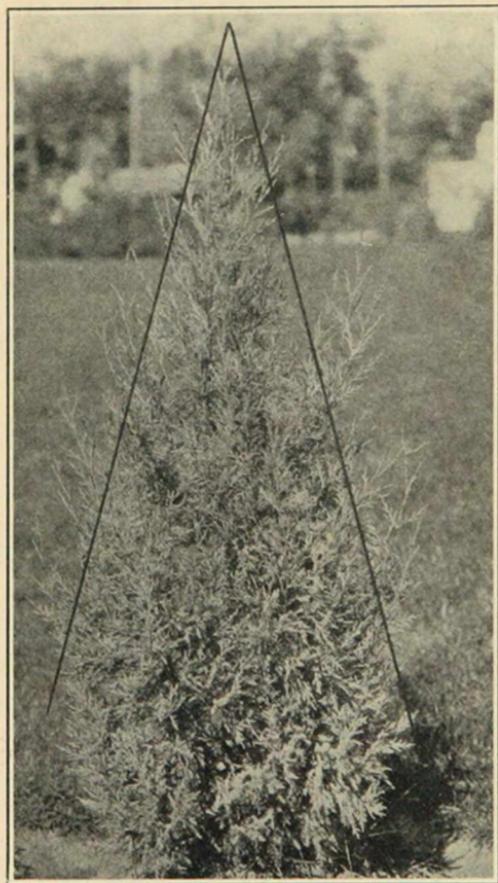


Figure 15.—Lines suggest a system of annual clipping to keep Colorado Juniper from becoming open and coarse.

greatly emphasized by contrast, if some green-needled ones are used with the silver-colored trees.

The native cedar (*Juniperus scopulorum*) (Figure 15), more properly called Colorado Juniper, is much used as an ornamental evergreen. The young trees often have the silvery color of Blue Colorado Spruce. The open and rather scraggly appearance of the older trees can be prevented to a certain extent by annual clipping of the outer tips of twigs as suggested by the lines drawn on the illustration (Figure 15). This shearing also preserves the conical shape most desired in this type of tree.

Douglas-fir (*Pseudotsuga douglasi*) sometimes called red spruce, is the one that is cut in this section for use as a Christmas tree. It adds variety to the mixed evergreen group but is objectionable on the one score that when planted near Blue Spruce it encourages a species of plant louse for which the Douglas fir is the alternate host. There are some individuals in this species too, which have the silver color.

Engelmann Spruce (*Picea engelmanni*) is a little finer of foliage and often shorter-leaved than Blue Spruce. It also has a different branching habit, but is otherwise so similar to the Blue Spruce that an expert is required to make the distinction.

Western Yellow Pine (*Pinus ponderosa*) a native of the Rocky Mountains is perhaps more commonly used as an ornamental in Colorado than any of the tree pines. It is a good material in the permanent windbreak or shelterbelt, particularly on dryland. This is the tree common to our foothills, with the large hard cone and long needles.

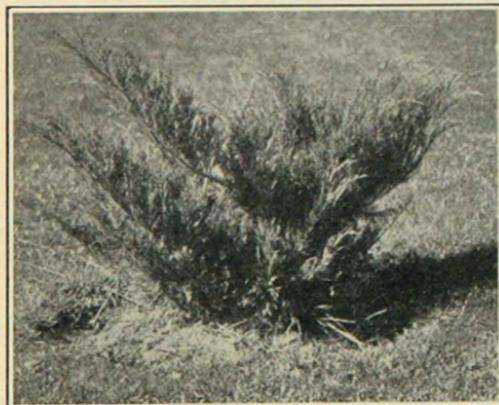


Figure 16.—Savin. A glossy green evergreen fine for low plantings.

Mugho Pine (*Pinus montana mughus*) is a good dwarf evergreen for use in places where medium-sized shrubbery could be used. It can be kept in a compact globe shape by occasional trimming. It is particularly interesting when the elongated, upright, new buds cover the plant like tiny candles.

Savin (*Juniperus sabiniana*) (Figure 16) is another of the so-called

dwarfs, having the characteristic foliage of the junipers and an upright growth of branches which contrasts well with the Mugho Pine.

The native Mountain Juniper (*J. communis montana*) (Figure 17) is a prostrate type which makes a good ground cover around or

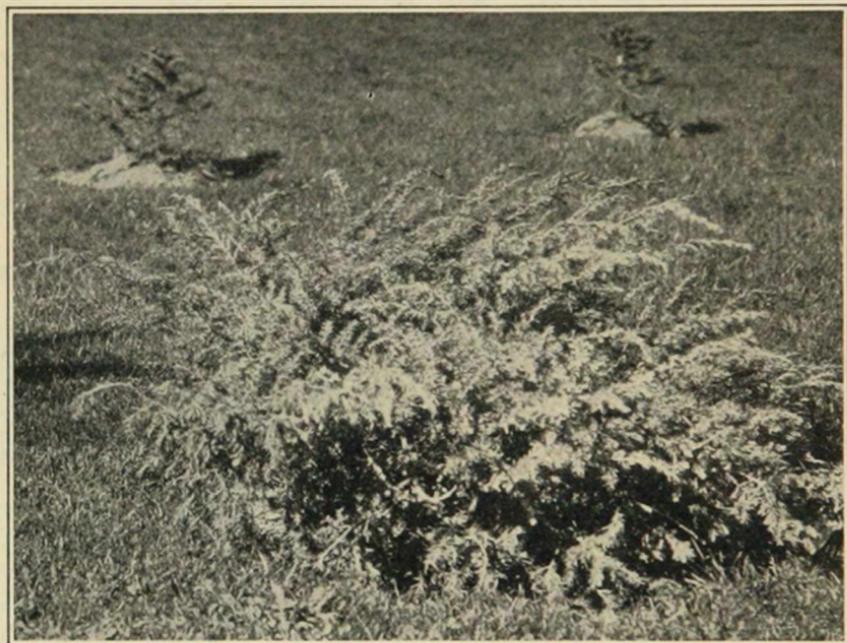


Figure 17.—Mountain Juniper. A good Colorado native for low evergreen plantings.

in front of a group of other evergreens. It is lower than Mugho Pine and Savin, and often has the silvery cast of Blue Spruce.

A number of Colorado native evergreens are not mentioned in the above list, and there are a great many others common to the trade; but those described comprise a representative list of the most hardy and generally well-adapted sorts for the State.

Because of their comparatively slow growth, the tree forms of evergreens, particularly Blue Colorado Spruce, are often used in places in front of a building or shrub group where there is not sufficient room for their complete development. Such an arrangement should only be temporary. When such specimens have outgrown their usefulness as "cute little trees," they should be transplanted to a background or exchanged for smaller trees.

Shrubs

As mentioned before, some plants are classed both as small trees and large shrubs and several mentioned in the list to follow depend simply upon their training for classification as one or the other.

Height of shrubs, like hardiness and hundreds of other arbitrary classifications in nature, is a variable quantity. There is often much wider variation between two individuals of the same species grown in different environments than there is between two species. In view of these limitations the impossibility of absolute accuracy is evident; but an approximation can of course be given.

Under average Colorado conditions of growth, the following shrubs are listed in descending order of their heights:

Russian-olive (*Elaeagnus angustifolia*) described before (Figure 12) is recognized by its slender leaves of silvery green and the large-seeded, pithy, white "olives." The fragrance of this shrub in spring makes it worth while in a mixed planting if for no other reason.

Rocky Mountain Maple (*Acer glabrum*) is a tall shrub, native of our hills, having a characteristic maple leaf but much smaller than the tree leaves. The bark is smooth and branches slender. The leaves add pleasing variety to a tall background or divisional planting, and are well colored in autumn.

Smooth Sumac (*Rhus glabra*) is known to most people by its gorgeous autumn coloring and erect tassel-like fruits. This shrub suckers freely from the roots and new plants must be thinned out or the group will be overrun by them.

Shining Sumac (*R. copallina*) is a similar one with slightly different foliage and fruit.

The Siberian Pea-tree (*Caragana arborescens*) mentioned before as a hedge plant (Figure 5) and later as a small tree, also makes a good tall bush when untrimmed. It has yellow, pea-shaped flowers in summer, leguminous foliage and an attractive, olive-green bark.

Coral Hawthorn (*Crataegus colorado*), also called red haw and thorn apple, is a member of a large group of which half a dozen are native to Colorado. They are difficult of classification even by botanists, they are so similar. *C. colorado* is a small tree with rather flat top; flowers are small, white and in clusters, followed by a red fruit in which seeds are surrounded by an apple-like pulp. Branches are armed with stout thorns, hence the name "thorn-apple."

Common Chokecherry (*Prunus virginiana*) is another example

of a native plant, useful as an ornamental. While individuals are often unshapely, they are useful in providing variety for a mixed mass of shrubs.

American Elder (*Sambucus canadensis*) is a good shrub to use near a bird bath, since birds are attracted by its large flat clusters of black berries which follow the white flower in the same-shaped cluster.

Golden American Elder (*Sambucus*) is the same as the above except that its foliage is golden thruout the season, offering a prominent contrast to the usual foliage color.

Flowering Plum (*Prunus triloba*) is a tall shrub more valuable for its flowers than fruit. Bloom comes early in spring and young leaves have a red color. Our wild species (*P. americana*) is as good in many respects for ornamental purposes.

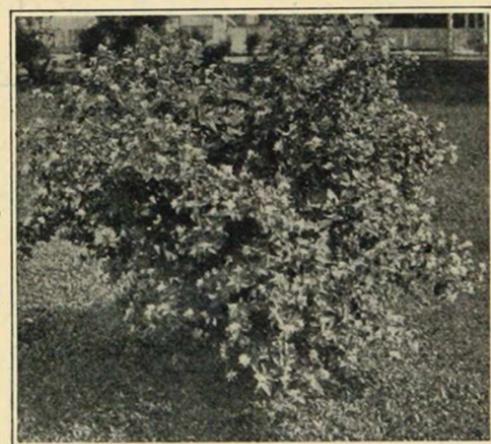


Figure 18. — Tatarian Honeysuckle. Rapid grower, obtainable with red, pink, or white flowers.

Tatarian Honeysuckle (*Lonicera tatarica*), the bush honeysuckle (Figure 18), may be had with white, pink or red flowers. It is among the very first of bushes to send out its new leaves, often being quite green while other bushes in the same planting are still dormant. It is a rapid grower and one of our most hardy shrubs. The bark is shaggy and silvery-gray in color.

There are a number of *Viburnums* that make good ornamentals. Perhaps the best known of this group is Common Snowball, which has large, round clusters of sterile flowers.

American Cranberrybush (*V. americanum*) and European Cranberrybush (*V. opulus*) are very similar to Common Snowball. Only the marginal flowers in a cluster are sterile in the Cranberrybush (or High Bush Cranberry) and the shrub bears clusters of red berries in late summer.

Wayfaring-tree (*V. lantana*) (Figure 19), has clusters of berries of such color when ripening that they bear a close resemblance to the lantana flower.

Blackhaw (*V. prunifolium*) is a native of Colorado, having some of the characteristics of the haws, whence the common name.

It has an oval-shaped, bluish-black, edible fruit. The seed is a flattened pit.

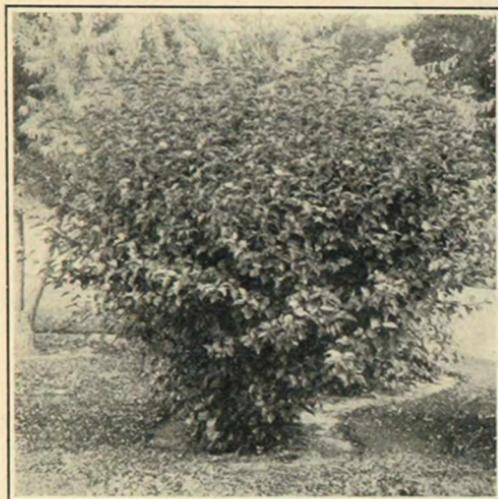


Figure 19.—Wayfaring-tree. Close relative of Snowball and Cranberrybush. All are good tall bushes.

Amur Tamarix (Figure 20) has a feathery foliage resembling that of the Junipers, and a feathery blossom. It thrives in dry locations and tho it often winter-kills in Colorado, the new growth from roots is rapid and a good-sized bush will grow in a single season from the old root. Some species bloom in spring and others in summer and fall; *T. parviflora* in April and May, and *T. gallica*, June and

July. Flowers are white and delicate pink. Amur Tamarix has pink flowers and blooms in August and September.

Common Lilac (*Syringa vulgaris*) may be had with white, blue,



Figure 20.—A group of Tamarix

violet or red flowers and many tints and shades between. Due to its habit of suckering from the roots, it will make a good thick hedge (Figure 6), but for other uses the suckers should be removed. The bush often does not bloom until it is 7 or 8 years old. Persian Lilac is more desirable in this respect. If all flowers are cut from lilac before going to seed, chances are better for next year's bloom.

Sweet Mockorange (*Philadelphus coronarius*) is so named from the resemblance of its fragrant blossoms to the orange blossom. This is a rapid-growing, tall bush, with medium-sized, light-green leaves and tan-to-brown colored bark.

Butterflybush (*Buddleia*) is classed among the shrubs, tho its habit of growth in Colorado is like the perennial flowers such as phlox, iris and delphinium. Its tops kill to the ground each year, but new growth is rapid and a medium-to-tall bush grows from the root in a single season. Summer lilac is another common name which describes the bloom. Flowers come late in summer when few shrubs are showing any bloom, and they are similar to the lilac in color and form.



Figure 21.—Persian Lilac. A smaller, finer textured bush than Common Lilac.

Persian Lilac (*S. persica*) (Figure 21) has smaller leaves and more slender branches than common lilac; its flowers are in a little looser panicle and the bush is smaller. Persian Lilac usually blooms the first or second year after planting, sometimes even the year it is planted, while Common Lilac sometimes will not bloom for several years.

Red-osier Dogwood (*Cornus stolonifera*) is a bush taller than medium-height, which has somewhat the appearance of a willow, tho broader-leaved. Its bark, particularly on the younger growth, is bright purplish-red in winter, adding some color to a

group of dormant shrubs that otherwise are of little ornamental value in that season. Small white flowers in clusters 1 to 2 inches across appear in spring and are followed by berries of a white-to-pearl-gray color. This is a native of our hills, where it grows along streams and gulches. Ours is one of a number of different species of *Cornus* which includes the farfamed Flowering Dogwood (*C. florida*) of the Eastern United States, which has, like the poinsettia, a number of colored leaf-like bracts surrounding a relatively small flower cluster, the whole giving the appearance of a large single flower.

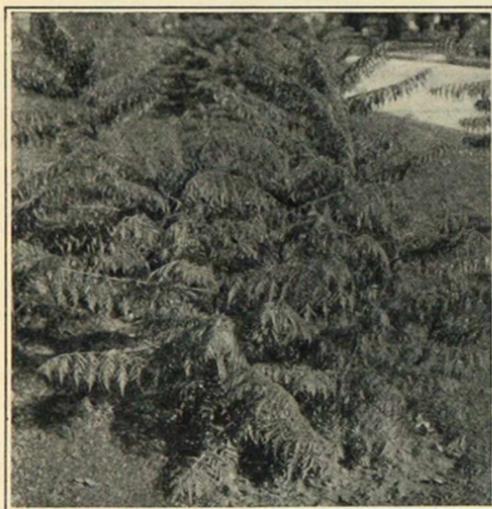


Figure 22.—Shredded Sumac. Similar to Cutleaf Sumac. Has branches resembling a stag's horns.

Shredded Sumac (Figure 22) and Cutleaf Sumac (Figure 23) are lower-growing forms of *Rhus* with deeply lobed leaves. One form of the former (*R. typhina*) is called Staghorn Sumac because of the resemblance of its horizontally branched and pubescent stems to the horns of a stag in the velvet.

Common Ninebark (*Physocarpus opulifolius*) has bright-green, lobed leaves and clusters of small white flowers of the rose type in early summer which resemble spirea, in which group it was once

listed. Its older stems appear to have many layers of bark from the shedding of thin strips which are continuously peeling off.

Fortune Forsythia (*Forsythia suspensa fortunei*) is of medium height, has dark-green, glossy foliage and arching branches. The flowers are yellow and are borne close to the stem in early spring, before the foliage appears.

Ural False-spirea (*Sorbaria sorbifolia*) is so named from the resemblance of its large, fluffy, white flower head to some of the spireas and the similarity of its foliage to that of the Mountain Ash (*Sorbus* sp.). Flowers come in early summer and the panicles per-

sist after flowers are gone. The appearance of the bush is improved by removing these after they have faded.



Figure 23.—Cutleaf Sumac. Not so tall as the common Smooth Sumac.

Bearberry Honeysuckle (*L. involucrata*) is a native of our hills that does well under cultivation. It is characterized when in fruit by its shiny black berries on enlarged purplish bracts.



Figure 24.—Vanhoutte Spirea. Probably the best all-round shrub of medium height for Colorado.

Vanhoutte Spirea (*Spiraea*) (Figure 24), is the most generally known of the long list of spireas under cultivation. Many know it as Bridalwreath. As an ornamental shrub of medium height, it is unexcelled in Colorado. Its foliage is dense and graceful and the bush is very hardy. It would be a worth-while shrub without its clusters of small white flowers in spring which nearly cover the bush.

Wild Rose (*Rosa*) is one of those groups of plants containing a vast number of very closely related species. The group as a whole is easily recognized and needs little description. There are

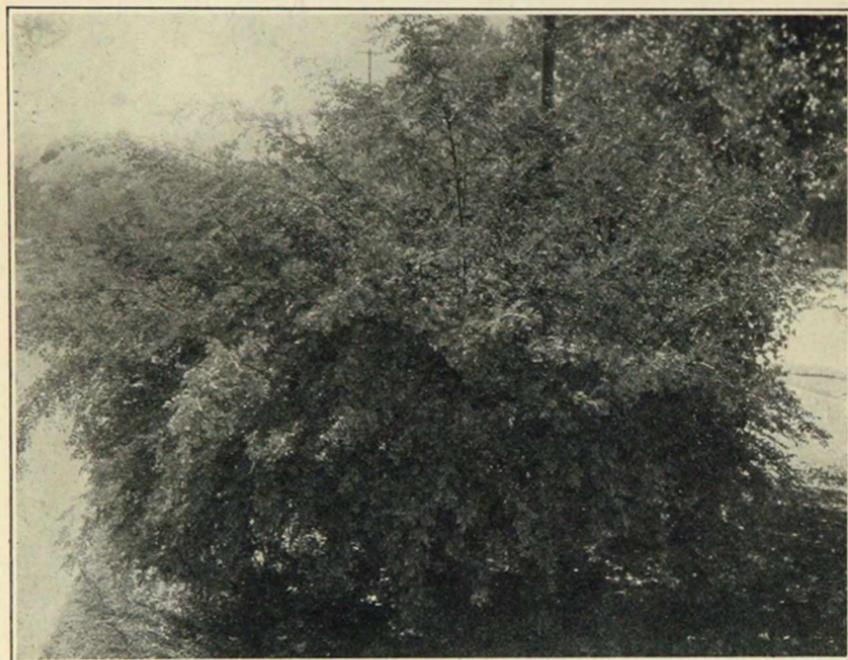


Figure 25.—Wild Rose. Many native shrubs will make equally fine cultivated ornamentals.

several different species native to the state. Figure 25 is an example of the kind of dense, well-shaped ornamentals that wild roses may become when properly cared for. Wild rose is often used for a naturalistic hedge.

Amur Privet (*Ligustrum amurense*) is commonly used as a hedge plant and is particularly good for low to medium-height clipped hedges. The bloom is in small, rather inconspicuous clusters. The bush is used most for the excellence of its dense foliage. When unclipped and planted singly, it makes a fine, symmetrical shrub of medium height. This one is hardy in most parts of Colorado, and is similar in appearance to California Privet (*L. ovalifolium*).

Aralia* (*Acanthopanax pentaphyllum*) (Figure 26), is not so formidable as the first glance at its name makes it seem, when a second look reveals that "acantho" means thorny; "panax" is the

*Not approved as a common name by authority. (Page 22.)

origin of "panacea," giving us something of the plant's early significance to man; and "pentaphyllum" describes its five-parted leaves. So in its name we have a partial description and history of the plant. The illustration shows this plant's unique habit of clothing its older branches with foliage clear to the ground. This one is used for its foliage; bloom is inconspicuous.

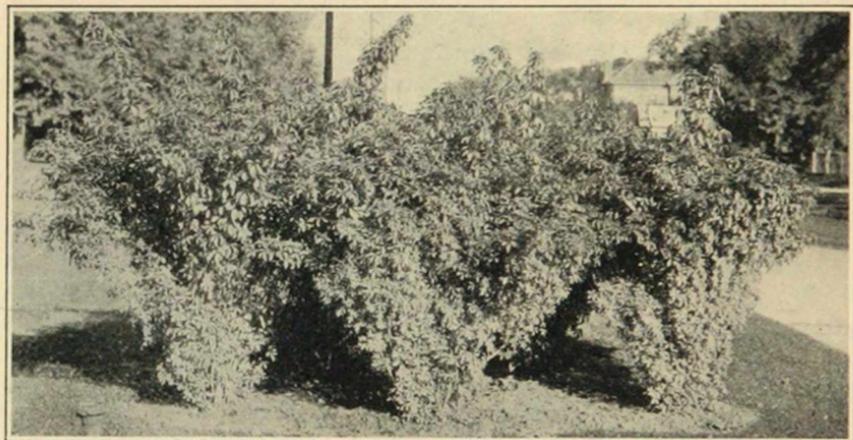


Figure 26.—Group of aralia bushes. Note new leaves clear to bases of old stems.

Boulder Raspberry (*Rubus deliciosus*) is often called False Raspberry and Thimbleberry. It has a leaf more like currant than raspberry, but an insipidly sweet fruit, shaped like a raspberry. This one is common all over our lower mountains; a bush of medium height, with showy white flowers like the wild rose, blooming in June.

Goldentwig Dogwood is a lower-growing bush with greenish yellow to golden branches. This one and Red-osier make a good combination in a group because of their contrasting bark colors. They do nearly as well in shade as in full sun and will thrive on most soils.

Golden Currant (*Ribes odoratum*) is an erect, medium-tall bush with wedge-shaped, three-lobed leaves and yellow flowers in spring. The flowers have a spicy fragrance and are a half inch or more long, of a tubular shape and sometimes have a small red line around the center of the flower near the open end. Blossoms are followed by a reddish-black currant. This bush is native to the rocky locations of our foothills, where it makes its contribution to the beauty of autumn coloring as well as adding variety to foliage forms thruout the growing season.

"Peegee" Hydrangea is a colloquial abbreviation of *Paniculata grandiflora*, now firmly established in the trade as the only common name of the plant. This is among the most hardy of the hydrangeas, and it is probably hardy in many places in Colorado where it has failed because of difficulty often encountered in planting. It has roots that are bare of fibrous branches, making it more difficult to start than many other bushes. Hydrangeas should be pruned after blooming, to encourage next season's bloom.

Bridalwreath (*Spiraea prunifolia*) has double white flowers and it blooms about the same time as Garland Spirea, that is 2 weeks or so earlier than Vanhoutte, which is often called Bridalwreath. The true Bridalwreath, however, is *S. prunifolia*. The size of bush and foliage is similar to Garland, but its white flowers are not pink in the bud as they are in Garland.

Froebel Spirea is a smaller bush than Vanhoutte but larger than Anthony Waterer described on page 40. Its leaves have a bronzy-red cast and its flowers, borne similarly to those of Vanhoutte, are red.

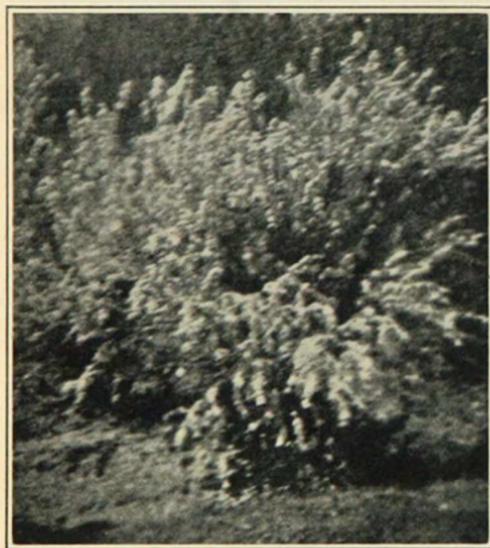


Figure 27.—Garland Spirea. Smaller and earlier blooming than Vanhoutte.

Garland Spirea (Figure 27) has small, narrow leaves and a more strict habit of growth. It blooms 2 or 3 weeks earlier in spring than Vanhoutte and the flowers are borne in garlands along several inches of stem instead of in clusters.

Willowleaf Spirea (*S. salicifolia*) is another medium-high, white-blooming sort, the leaves of which are a shiny green and the shape of willow leaves.

Virginal Mockorange has larger flowers and is a smaller bush than Sweet Mockorange; it can be classed as a bush of medium height. Leaves and stems are the same, except for size, as the Sweet Mockorange.

Illinois Ninebark (*Physocarpus intermedius*) is a bush similar to *P. opulifolius* described on page 34, but common to our mountains in the lower foothills. It is sometimes called wild spirea because of the resemblance mentioned.

Common Snowberry (*Symphoricarpos racemosus*) (Figure 28), has snowy-white berries in fall which follow rather inconspicuous

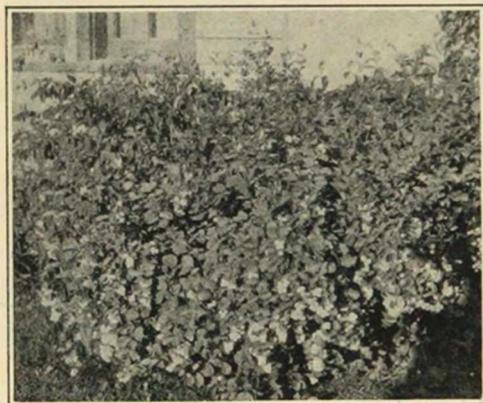


Figure 28.—Common Snowberry. A good 2 to 4-foot bush. Grows well in shade.

pink flowers. This is a good low bush for planting under low-silled windows or in front of taller bushes. It does well in both sun and shade and is often used on the north sides of buildings where dogwood is a good medium-to-tall bush with which to use it. *S. occidentalis*, the Western Snowberry, is a native of Colorado, and the Dwarf Snowberry, *S. pauciflorus*, is another still smaller native.

Coralberry (*Symphoricarpos vulgaris*) is sometimes called Red Snowberry because of the close relationship. It is also a Colorado native, tho less widely distributed than the white one. Foliage and bush are very similar to white snowberry, but the clusters of berries on this one are red and smaller. Foliage of the snowberry and coralberry resembles the honeysuckle of which family they are members.

Japanese Barberry (*Berberis thunbergi*) (Figure 29) should not be confused with *B. vulgaris*, the species which is alternate host of the wheat rust. It is a small, thorny bush with oval-shaped leaves that are thick and glossy. It has a hard red berry that persists thru the winter. With occasional trimming of the outer twigs it may be kept in a fine, compact, roundish form.

Shrubby Cinquefoil (*Potentilla fruticosa*) is a native low bush often used in ornamental planting. Its leaves are pubescent, grayish green and deeply lobed, forming five parts. Yellow flowers like the wild rose and an inch or more across, are borne nearly all summer.

Mountain Currant (*Ribes alpinum*) is a low bush similar to the Golden Currant previously described; the main difference being one of height.



Figure 29.—Japanese Barberry. This low, thorny ornamental has no connection with wheat rust.

Anthony Waterer Spirea is a good representative of the class of small 2 to 3-foot spireas that bloom in summer on the current season's growth. Most spireas for outdoor planting bear flowers on wood formed the previous season. The bloom is red and borne in clusters like Froebel Spirea, but foliage is green without the bronzy-red cast.

Native Shrubs

A number of ornamentals common to the trade or species closely related to them are natives of Colorado. Many of these wildlings make very presentable ornamentals when given the advantage of care and cultivation.

In the above list all that are Colorado natives are designated as such in the descriptions. There are many more that show equal promise and are worthy of trial for ornamental purposes. These species, too, are known to be adapted to Colorado conditions.

Roses

Roses are as truly shrubs as any of the above, but in their use for outdoor planting they are treated more like perennial flowers; that is, they are most efficiently cared for and give the best mass effects when a number of bushes are planted in a group.

Roses need frequent spraying for lice and red spiders and sometimes a dusting for mildew. In winter they need some sort of protection such as covering all the tops, or with older bushes, the hilling up of soil over the crown. These operations are facilitated by having all the bushes grouped together. The effect of bloom is also heightened by grouping.

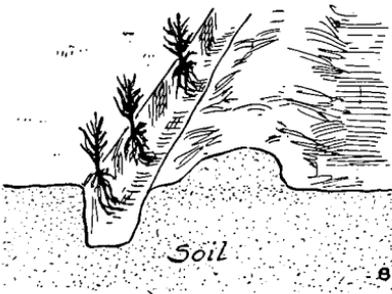
Pruning of bush roses should be more severe than the pruning of other ornamentals. Usually a rose (of the large-flowered kinds) does best when cut to within a few inches of the ground every year.

Size of blooms and length of stem of roses may be improved by disbudding. This is simply the removing of all buds but the terminal one on each flowering shoot when buds are small. Length of stem is increased by pinching off even the terminal bud, one or more times from the same shoot, and then letting the next one come to flower.

Roses will reward continuous fertilization and cultivation. Irrigations should be such as to soak the soil deeply and then allow enough time between waterings to let the soil nearly dry out.

Hedges

Hedges, particularly the clipped ones, seem, like roses, to make a special appeal to amateurs, even interesting many who do not feel the "urge" of other kinds of gardening.



Perhaps most common of low-to-medium-height, clipped hedges is the privet. Amur privet (*Ligustrum amurense*) is a species hardy in Colorado. This one is very similar in habit and appearance to California Privet (*Ligustrum ovalifolium*). In planting, dig a trench with one side squared with a spade to a rope or line and pile the soil on the opposite side

so that it will not interfere with planting. Set plants along the straight side of the trench about a foot apart (taller plants need not be set so closely), and settle loose soil around the roots by watering before all the soil is replaced in the trench. This method of settling the soil is better than tramping.

If a wider hedge is desired, plant a double row of plants with the rows a foot apart and a plant in one row opposite a space in the other. Shorten all plants about one-third unless they have already been cut back at the nursery.

There is no one form of clipping better than another except that the hedge should not be narrower at the bottom than top. If sides slope, the hedge should be widest at the bottom.

There is no particular skill required other than neatness in trimming the hedge. The well-kept appearance is furthered by frequent clipping during the growing season. Some sort of frame or tight wire

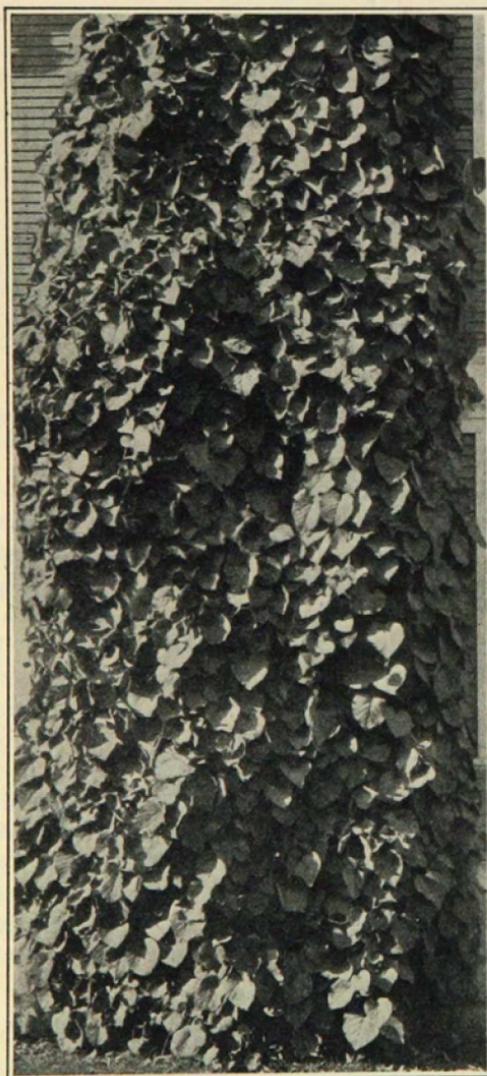


Figure 30.—Dutchmans-pipe. A good vine to cover porches, fences or walls.

should be used as a guide the first few times a new hedge is trimmed.

Some other good hedge materials for Colorado are Russian-olive and Caragana for tall ones, Vanhoutte Spirea, medium, and Barberry, low.

Vines

Sweet Autumn Clematis (*Clematis paniculata*) is often simply called White Clematis. It has a very dense foliage and a twining habit of growth. It will take care of itself on a trellis, but will not climb without one. Flowers are small but very numerous, covering the entire vine in a fluffy, white mass.

Jackman Clematis (*Clematis jackmani*), is not so rank a grower, is a little harder to transplant, and has large dark-blue flowers 2 to 4 inches across. It also needs trellising.

Dutchmans-pipe (*Aristolochia siphon*) (Figure 30), will climb wire or twine as a morning glory does. It has very large, heart-shaped leaves and

smooth green stems. It makes a dense covering and has its name from the odd-shaped flowers which have the form of a long, curved-stem, Dutch pipe.

Climbing Rose is a favorite subject for the trellis and in many places it becomes acclimated so as to withstand the winters, but it should have its top covered with soil the first few winters for protection. One guess is as good as another as to when the covering may be safely discontinued.

Riverbank Grape (*Vitis vulpina*) (native) or any other of a number of the horticultural varieties of grapes, make excellent cover for arbors and pergolas.

China Fleecevine (*Polygonum auertii*) has been rather widely advertised by the common name "Silver Lace Vine." It is a profuse bloomer and the flowers are in large, loose panicles giving a misty-white effect when the vine is in bloom.

Common Matrimony-vine (*Lycium halimifolium*) is perhaps the most hardy and will stand more abuse than any of our vines. Its common name is a rather serious indictment against the state of matrimony; the vine is such a thorny, scraggly individual. It is good for trailing over unsightly low objects, but does not climb well.

The above are all perennial vines, only the more common ones being listed.

Perennials

All the trees, shrubs and vines listed above are perennials, but the plants most commonly known as perennials are those which have roots that live for a number of years and annual tops that die each year and start anew the next.

To give even as fragmentary a description of perennials as the foregoing has been for trees and shrubs, would require a bulletin the size of this one. Perennials will just be mentioned here, important as they are in completing the garden plan, because it is felt that the most noticeable, year-round improvement in home grounds is made with trees, shrubs and lawns. The planting may be embellished then with perennials. The former is required as a sort of framework and background for the latter.

The perennial border, as a group of perennial plants is often called, is usually confined, as the term implies, to the border of a shrub or tree group, or the edge of the yard itself. It need not necessarily surround the group or yard, as the common conception of a "border" would lead one to believe.

The same general suggestions for distribution of shrubs and trees

hold for perennials. If the planting is to be of a very formal nature, use straight rows and angular or symmetrically curved edges. For an informal arrangement, use an irregular or naturalistic curve in laying out beds.

Perennials as well as annuals look well used with shrubs for a background (Figure 31). The outline of the shrubbery can be extended farther out into the lawn and the space gained planted to perennials and spring-flowering bulbs which are also perennial by nature.

In most cases a better effect from a given number of perennials is obtained by planting several of each kind in groups than can be had by assorting the same number of plants and using each plant singly. The idea of assortment is a good one, but the succession of bloom and variety of foliage so desirable in the border is more effective when groups are assorted than when individuals are mixed in

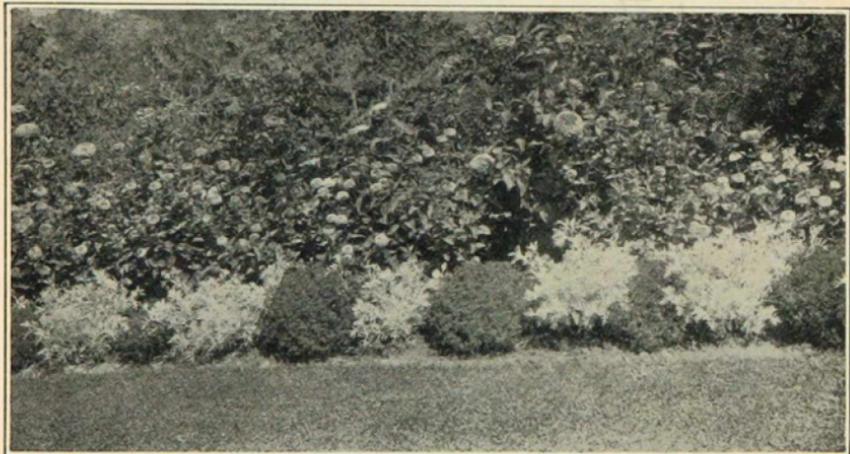


Figure 31.—Annual flowers used to "bolster up" the foliage on a first-year shrub group.

the planting, even tho the same total number of plants are used in both cases.

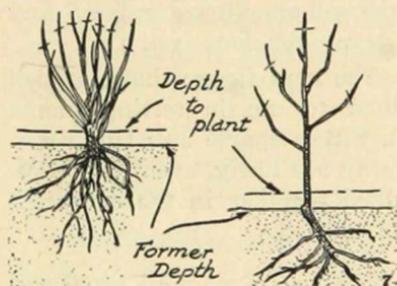
The ease of maintenance is increased as much as the general effect is improved, by planting in groups instead of scattering a small number of plants over a large area.

In planning the perennial border, follow the plan used in locating shrubs in a group—largest and tallest specimens to the center or back and farther apart, grading down thru the medium tall to the smaller ones planted more closely in the front.

A succession of bloom may be planned so that the bed is seldom without flowers. For instance, tulips, iris, peonies, phlox, poppies, daisies, boltonia and chrysanthemums will furnish a continuous succession from early spring to late fall and there are many more that are hardy in most of Colorado. Even without much variety, a long period of bloom may be had by using early, mid- and late-season varieties of the same species or, as with "glads," by a succession of plantings.

Planting

Original planting of trees and shrubs on new grounds is essentially transplanting, the moving plants to different places on the same grounds is the usual conception of the term.



In transplanting a bush or tree, determine from the stem color, where the ground line was and plant an inch or 2 deeper. If it has not already been done at the nursery, prune the tops and branches a few inches as indicated.

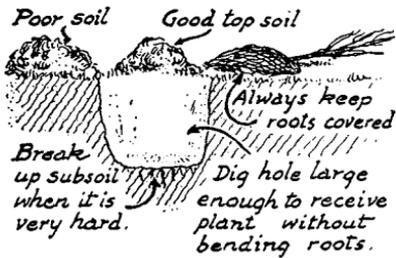
With grafted specimens like the cherry tree in the sketch, plant deeply enough to put the graft an inch or 2 under the surface.

Ordinarily, only the larger roots of trees need be pruned at planting time. Even the large roots which are cut short enough when the plant is dug, are benefited by a fresh cut made so as not to appreciably shorten them. Tops of fairly large bushes and most trees should be headed back enough to balance the roots cut off or removed to enable roots to establish themselves more quickly.

The hole need only be large enough to comfortably accommodate roots. If the hole is very much too large or deep, the plant may settle with the soil when watered, so as to leave the plant considerably deeper than was intended. A striking example is the peony which is properly planted with "eyes" 1 to 2 inches deep and then sinks to 6 or 8 inches, failing to bloom in consequence; because the hole was dug deeper than needed.

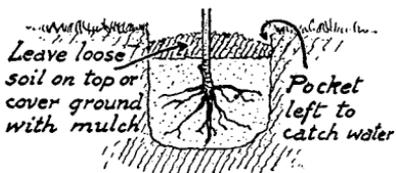
If there is a difference in quality of soil from the bottom of the hole, make separate piles in digging. Keep roots covered with damp burlap or soil while digging.

If soil is exceptionally poor, bring a better top soil from else-



where for filling around roots instead of putting back what came out of the hole. Fertilizer at planting time is best used as a top dressing after roots are covered rather than in the hole itself or mixed in the planting soil.

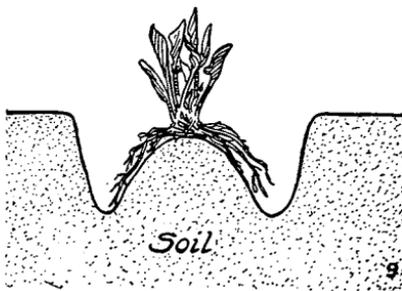
The accompanying sketch explains the replacement of soil better than words. As suggested under "Hedges," soil is firmed around the roots more efficiently by watering before tramping the soil in the hole. Then the remainder of the soil should be replaced and the tramping done last.



Note - Manure unless well rotted and thoroly mixed with the soil should be used only on top if used at all.

The next figure shows a good method to use in setting plants with rather sparse and fine roots.

Such plants when set in the ordinary way are likely, even with careful planting, to have their roots wadded together in the center of the hole, instead of having their normal spread.



The hole is made as usual and then a mound of soil put back in the center of the hole before planting. The mound is made high and wide enough so that a plant placed on top of it will have a natural spread of roots along the sides of the mound and will stand at the proper depth in the soil. Subsequent filling of the hole then cannot

crush the roots into an unnatural position.

Pruning

Pruning is not imperative in growing ornamentals but a moderate amount of it often improves appearances considerably.

Some roots are always cut off in digging a tree or bush. In order to balance top and root, the plant should be pruned a little at the top at planting time. This "heading back" is often done at the nursery before delivery of the order.

The pruning necessary to maintain neat appearance is simply trimming, a mild form of pruning, and may be done any time of year. The normal habit of growth of the individual is considered and the scraggly, unsightly branches which do not conform to this general shape are cut out or simply cut back enough to make them conform. The notable exception is the case of a clipped hedge which is trimmed to conform to a predetermined shape instead of the natural habit.

Some bushes like lilac and some of the spireas, form rather unsightly seed pods after blooming. Appearance of such plants is improved by trimming off these old flower heads. This may be done any time after full bloom.

Many bushes and trees tend to make a more dense foliage if clipped periodically at the tips of branches. The time of year for such trimming is determined by blooming time. If it is done at any other time than shortly after the period of bloom, the next crop of flowers is likely to be impaired.

Whenever single, isolated branches of a tree or bush show disease or have been destroyed by insects, these members should be trimmed out and burned to prevent spread of the pest.

Another type of pruning is that which is done for renewal of the bush. This, as a rule, should be done in the dormant period when leaves are off. Renewal is simply the replacing of old wood by new, as is practiced in the culture of bush fruits. A few of the oldest members of the bush are cut out each year clear to the ground and are replaced by younger wood, thus keeping the top of the plant constantly renewed. Obviously, the treatment will vary with different kinds of stock, but as with trimming to shape the bush, its normal habit of growth will govern.

Evergreens

Note—Where only genus name appears under "Botanical," the authority (page 22) recommends use of common name only.

Botanical Name	Common Name	Height	Fruit	Page
<i>Juniperus communis montana</i>	Mountain Juniper	Trailing	Berries (Grey-blue)	29
<i>Juniperus sabina</i>	Savin	Dwarf	Berries (Grey-blue)	28
<i>Juniperus scopulorum</i>	Colorado Juniper	Small tree	Berries (Grey-blue)	28
<i>Picea engelmanni</i>	Engelmann Spruce	Tall	Cones	28
<i>Picea</i>	Blue Colorado Spruce	Tall	Cones	27
<i>Pinus montana mughus</i>	Mugho Pine	Dwarf	Cones	28
<i>Pinus ponderosa</i>	Western Yellow Pine	Tall	Cones	28
<i>Pseudotsuga douglasi</i>	Douglas-fir	Tall	Cones	28

Deciduous Trees

Botanical Name	Common Name	Height	Use	Page
<i>Acer dasycarpum</i>	Silver Maple	Large	General	25
<i>Acer platanoides</i>	Norway Maple	Medium	General	25
<i>Acer</i>	Schwedler Maple	Medium	Specimen	25
<i>Aesculus hippocastanum</i>	Horsechestnut	Small to Medium	Specimen	23
<i>Betula alba pendula</i>	European Weeping Birch	Medium	Specimen	23
<i>Celtis occidentalis</i>	Hackberry	Large	General	25
<i>Fraxinus americana</i>	White Ash	Large	General	25
<i>Gleditsia triacanthos</i>	Common Honeylocust	Medium	General	25
<i>Malus</i>	Bechtel Crab	Small	Specimen	23
<i>Populus bolleana</i>	Bolleana Poplar	Tall	Specimen	26
<i>Populus sargentii</i>	Sargent Cottonwood	Large	General	26
<i>Populus</i>	Lombardy Poplar	Tall	Specimen	26
<i>Populus</i>	Carolina Poplar	Large	General	26
<i>Robinia pseudoacacia</i>	Common Locust	Large	General	26
<i>Sorbus americana</i>	American Mountain-ash	Medium	Specimen	23
<i>Tilia americana</i>	American Linden	Large	General	25
<i>Ulmus americana</i>	American Elm	Large	General	24
<i>Ulmus pumila</i>	Dwarf Asiatic Elm	Medium	General	24

Botanical Name	Common Name
<i>Acanthopanax pentaphyllum</i>	Rocky Mountain Maple
<i>Acer glabrum</i>	Japanese Barberry
<i>Berberis thunbergii</i>	Butterflybush
<i>Buddleia</i>	Siberian Pea-tree
<i>Caragana arborescens</i>	Red-osier Dogwood
<i>Cornus stolonifera</i>	Goldentwig Dogwood
<i>Cornus</i>	Coral Hawthorn
<i>Crataegus colorado</i>	Rusian-olive
<i>Elaeagnus angustifolia</i>	Fortune Forsythia
<i>Forsythia suspensa fortunei</i>	Peegee Hydrangea
<i>Hydrangea</i>	Amur Privet
<i>Ligustrum amurense</i>	Bearberry Honeysuckle
<i>Lonicera involucrata</i>	Tatarian Honeysuckle
<i>Lonicera tatarica</i>	Sweet Mockorange
<i>Philadelphus coronarius</i>	Virginal Mockorange
<i>Philadelphus</i>	Illinois Ninebark
<i>Physocarpus intermedius</i>	Common Ninebark
<i>Physocarpus opulifolius</i>	Shrubby Cinquefoil
<i>Potentilla fruticosa</i>	Flowering Plum
<i>Prunus triloba</i>	Common Chokecherry
<i>Prunus virginiana</i>	Shining Sumac
<i>Rhus copallina</i>	Smooth Sumac
<i>Rhus glabra</i>	Staghorn Sumac
<i>Rhus typhina</i>	Cutleaf Sumac
<i>Rhus</i>	Shredded Sumac
<i>Rhus</i>	Mountain Currant
<i>Ribes alpinum</i>	Golden Currant
<i>Ribes odoratum</i>	Wild Rose
<i>Rosa</i>	Boulder Raspberry
<i>Rubus deliciosus</i>	American Elder
<i>Sambucus canadensis</i>	Golden American Elder
<i>Sambucus</i>	Ural False-spirea
<i>Sorbaria sorbifolia</i>	Bridalwreath
<i>Spiraea prunifolia</i>	Willowleaf Spirea
<i>Spiraea salicifolia</i>	

Shrubs

Height	Bloom	Page
4 to 6 feet	Inconspicuous	36
10 to 12 feet	Inconspicuous	30
2 to 4 feet	Inconspicuous	39
6 to 8 feet	Late Summer	33
12 feet	May	30
6 feet	June	33
4 feet	June	37
12 feet	May	30
20 feet	Inconspicuous	30
6 to 8 feet	April	34
3 to 4 feet	August and September	38
4 to 6 feet	June	36
4 to 6 feet	June	35
8 to 10 feet	June	31
8 to 10 feet	June	33
4 to 6 feet	June	38
3 to 4 feet	June	39
4 to 6 feet	June	34
2 feet	All Summer	39
6 to 8 feet	May	31
8 to 10 feet	May	30
8 to 10 feet	July	30
8 to 10 feet	July	30
8 to 10 feet	July	34
4 to 6 feet	July	34
4 to 6 feet	July	34
2 to 3 feet	May	39
4 to 6 feet	May	37
4 to 6 feet	May to June	36
4 to 6 feet	June	37
6 to 8 feet	July	31
6 to 8 feet	July	31
4 to 6 feet	June	34
3 to 5 feet	May	38
3 to 5 feet	June	38

Botanical Name	Common Name	Height	Bloom	Page
<i>Spiraea</i>	Anthony Waterer Spirea	2 feet	July to October	40
<i>Spiraea</i>	Froebel Spirea	3 feet	July to October	38
<i>Spiraea</i>	Garland Spirea	3 to 4 feet	May	38
<i>Spiraea</i>	Vanhoutte Spirea	3 to 5 feet	June	35
<i>Symphoricarpos occidentalis</i>	Western Snowberry	3 to 4 feet	Inconspicuous	39
<i>Symphoricarpos pauciflorus</i>	Dwarf Snowberry	2 to 3 feet	Inconspicuous	39
<i>Symphoricarpos racemosus</i>	Common Snowberry	3 to 4 feet	Inconspicuous	39
<i>Symphoricarpos vulgaris</i>	Coralberry	3 to 4 feet	Inconspicuous	39
<i>Syringa persica</i>	Persian Lilac	5 to 8 feet	May	33
<i>Syringa vulgaris</i>	Common Lilac	6 to 12 feet	May	32
<i>Tamarix gallica</i>	French Tamarix	8 to 10 feet	June	32
<i>Tamarix parviflora</i>		15 feet	May	32
<i>Tamarix</i>	Amur Tamarix	12 feet	August to September	32
<i>Viburnum americanum</i>	American Cranberrybush	6 to 10 feet	June	31
<i>Viburnum lantana</i>	Wayfaring-tree	6 to 10 feet	June	31
<i>Viburnum opulus</i>	European Cranberrybush	6 to 10 feet	June	31
<i>Viburnum prunifolium</i>	Blackhaw	6 to 10 feet	June	32
<i>Viburnum</i>	Common Snowball	6 to 8 feet	June	31

Vines

Botanical Name	Common Name	Bloom	Page
<i>Aristolochia sipho</i>	Dutchmans-pipe	June	42
<i>Clematis jackmani</i>	Jackman Clematis	July	42
<i>Clematis paniculata</i>	Sweet Autumn Clematis	July	42
<i>Lycium halimifolium</i>	Common Matrimony-vine	June	43
<i>Polygonum auberti</i>	China Fleecyvine	July	43
<i>Rosa</i>	Climbing Rose	June	43
<i>Vitis vulpina</i>	Riverbank Grape	Inconspicuous	43

SHRUBS FOR SPECIAL PURPOSES
For Dry or Sandy Soils

Siberian Pea-tree
Sumac

Tamarix
Wild Rose

For Shady Places

Dogwood
American Elder
Snowberry

Coralberry
Blackhaw
Privet

For Hedges

Japanese Barberry
Amur Privet
Russian-olive
Siberian Pea-tree
Peegee Hydrangea
Bush Honeysuckle

Mockorange
Wild Rose
Anthony Waterer Spirea
Froebel Spirea
Vanhoutte Spirea

For Winter Effect

Red-osier Dogwood
Goldentwig Dogwood
Japanese Barberry
Snowberry

Coralberry
Privet (Unclipped)
Sumac