

## Trees and Shrubs for Mountain Areas

Fact Sheet 7.423

Gardening Series | Trees and Shrubss

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This fact sheet discusses non-native trees and shrubs for mountain areas above 6,500 feet. For native trees and shrubs for Colorado landscapes please refer to fact sheets 7.421 and 7.422. For recommendations for lower altitudes, see fact sheets 7.418, Small Deciduous Trees; 7.419, Large Deciduous Trees; 7.414, Evergreen Shrubs; and 7.403, Evergreen Trees. The dividing line for a wide variety of trees appears to be at or near 7,500 ft. in Colorado. Tables 1 and 2 include non-native trees and shrubs hardy for various elevations above 6,500 feet.

### Selection

Use the list of shrubs and trees from the following tables as a guide to select those most adaptable to local elevation and exposure. These lists do not take into consideration the different microclimates (such as north, south, east, and west-facing slopes) and soil conditions possible at a given elevation. Cultural factors to take into consideration include:

- Soil moisture and drainage. The following tables include a notation on moisture and drainage conditions for best performance and survival.
- Exposure. Some plants perform better in the shade, others in full sun. A warm, south-facing microclimate may allow trees and shrubs to perform better at higher altitudes than indicated. Exposure to wind can also determine whether a tree or shrub will survive at higher elevations.

- Length of frost-free period. Some shrubs may survive at a given elevation but may not produce flowers or fruit due to a short frost-free period.

When purchasing trees from a nursery, attempt to find out where the stock was grown. Stock originating from southern and Pacific Coast sources may be less hardy even though it is sold under the same name as stock from northern or higher elevation nurseries.

### Establishment

In mountain areas, the best time to plant trees and shrubs is as early in spring as the soil can be worked, provided that the planting stock is fully dormant. Leafed-out plants should be planted after the last frost, up until mid-August. Nursery stock grown below 6000 feet leafs out earlier. New growth may not be hardened enough to withstand the current conditions at higher elevation at planting time. Acclimate plants by gradually exposing them to mountain conditions over a period of several days or weeks. Bring them outdoors for longer periods of time each day.

Shrubs grown in pots can be planted anytime spring through late summer (mid-August to early September, depending on elevation) in order to allow some root establishment before the ground freezes.



### Quick Facts

- Consider the length of the growing season, soil characteristics and exposure before selecting trees and shrubs for specific sites.
- Plant trees in the spring.
- Plant shrubs in the spring until late summer.
- Mulch the root area to help delay freezing of the soil in the fall and to retain soil moisture..

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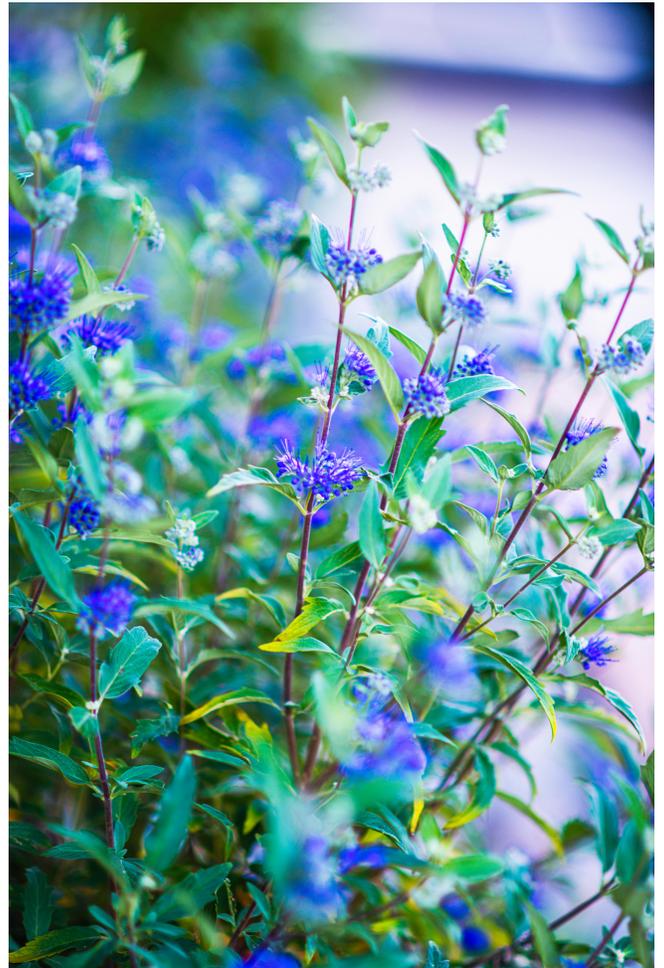
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Use organic mulches, such as pine needles, shredded bark or wood chips, around the plant to delay freezing of the soil in the fall and to prolong root development. Mulching 3 to 4 inches deep over the root area also helps to retain soil moisture. To reduce the potential for insect, disease and rodent damage, avoid applying mulch directly in contact with tree trunks and woody stems. Most shrubs in pots are grown in a soilless media. Dig a saucer-shaped hole two to three times as wide as a root ball but no deeper than the depth of root ball. Amending the excavated soil 10 to 20 percent by volume with organic material may be beneficial. In areas where multiple shrubs or trees will be planted, it is best to amend the entire area. Refer to fact sheet 7.235, Choosing a Soil Amendment.

Tables 1 and 2 indicate the relative moisture needs of trees and shrubs for mountain areas. Plant species with similar water needs in the same general area. Do not mix trees and shrubs with widely different water needs.

Snow cover can be an excellent mulch. It allows root growth to occur even during some periods of the winter. Encourage snow to drift over the root zone of young plants by using temporary snow fences in appropriate locations. In general, snow accumulation is best around a tree or shrub if the fence is placed on the upwind side of the tree or shrub.

Wrap trunks of young, thin-barked deciduous trees with a commercial tree wrap in the fall to prevent sunscald. Wrap from the base up to the first or second main branch and tie or tape it there. Remove the wrap in spring. Repeat annually until bark thickens. Some fencing or protection against elk, deer and rodents may also be needed.



Caryopteris x clandonesis or Blue Mist Spirea under Table 1



Malus 'Thunderchild' Thunderchild Crabapple under Table1

**Table 1. Trees for mountain areas.**

Scientific name Common name	Planting Elevation in feet	Exposure <sup>1</sup>	Moisture <sup>2</sup>	Mature Size <sup>3</sup> H' x W'	Comments
<i>Acer ginnala</i> Amur or Ginnala maple	To 8,000	FS to PS	M	15-20' x 10-15'	Available in single stem or clump form. Orange-red fall color. Fragrant flowers. Showy winged seeds in late summer persist into winter. Needs a pH less than 7.5 or may develop iron chlorosis.
<i>Acer tataricum</i> Tatarian maple	To 8,000	FS to PS	M	15-20' x 15-20'	Available in single stem or clump form. Yellow fall color. Red winged seeds in late summer. More tolerant of high pH soils.
<i>Amelanchier canadensis</i> Shadblow serviceberry	To 8,500	PS	M	15-20' x 10-15'	Rounded habit. Multi-stemmed large shrub or single-stemmed small tree. Small, white, fragrant spring flowers appear before foliage. Edible blue fruits midsummer; attractive to birds. Orange-red fall color.
<i>Caryopteris x clandonensis</i> Blue Mist Spiraea	To 8,500	FS	L-M	3-4' x 4-5'	Rounded shrub with gray-green aromatic leaves that turn yellow in the Fall. Blue flowers in summer attract pollinators, followed by small light tan seed pods that persist through the winter. 'Dark Knight' is the most common cultivar. It has darker foliage and flowers. 'Worcester Gold' has yellow foliage that becomes chartreuse in heat of summer. Do not overwater.
<i>Celtis occidentalis</i> Common hackberry	To 7,000	FS	L - M	45-50' x 25-35'	Rounded habit. Distinctive warty bark. Wind and snow tolerant. Leaves prone to hackberry niplegall.
<i>Crataegus ambigua</i> Russian hawthorn	To 9,000	FS to PS	L - M	15-20' x 15-20'	Rounded to irregular habit. Showy white flowers in spring. Red persistent fruit in late summer. Deeply lobed leaves. Short stiff thorns. Yellow to orange fall color.
<i>Crataegus crus-galli</i> Cockspur hawthorn	To 8,000	FS	L - M	15-20' x 15-25'	Broad, dense, rounded habit. Showy but malodorous white flowers in spring. Dark, green, glossy leaves. Persistent red fruit in late summer. Yellow-orange fall color. Long, narrow thorns. The variety <i>inermis</i> is thornless.
<i>Crataegus x mordenensis</i> 'Toba' Toba hawthorn	To 8,000	FS	L - M	15' x 12-15'	Upright rounded habit. Very showy fragrant double white flowers fade to pink. Small persistent red fruit. Thornless.
<i>Malus 'Dolgo'</i> Dolgo crabapple	To 8,000	FS	M	20-30' x 20-25'	Broad, open habit. Pink buds open to white flowers. Large red fruit does not persist. Yellow-orange fall color. Best in a warm microclimate.
<i>Malus 'Radiant'</i> Radiant crabapple	To 8,000	FS	M	20-25' x 15-20'	Dense rounded habit. Foliage opens purple-red, then turns bronze-green. Deep pink flowers followed by persistent, small red fruit. Yellow-orange fall color.
<i>Malus 'Spring Snow'</i> Spring Snow crabapple	To 8,000	FS	M	20-25' x 15-20'	Oval to rounded, dense habit. Bright green foliage. Single, white, fragrant flowers seldom set fruit.
<i>Malus 'Thunderchild'</i> Thunderchild crabapple	To 8,000	FS	M	15' x 10'	Upright, spreading habit. Purple foliage. Pink flowers followed by purple fruit which does not persist. Valued for foliage color.
<i>Populus alba</i> White or silver poplar	To 8,500	FS	M - H	30-50' x 25-40'	Broad spreading habit. Dark green maple-like leaves are white underneath. Yellow fall color. May sucker from roots. Fast growing. Disease prone.

**Table 1 (cont.). Trees for mountain areas.**

Scientific name Common name	Planting Elevation in feet	Exposure <sup>1</sup>	Moisture <sup>2</sup>	Mature Size <sup>3</sup> H' x W'	Comments
<i>Populus tremula</i> 'Erecta' Upright European aspen	To 8,500	FS to PS	M	50' x 15'	Narrow, columnar habit. Dark green leaves tremble like native aspen. Yellow-orange fall color. Disease prone.
<i>Prunus virginiana</i> 'Schubert' Schubert chokecherry	To 8,500	FS to PS	L - M	20-25' x 15-20'	Oval, rounded habit. Suckering tree with dense, slender branches. Leaves emerge green and change to purple-red. Pendulous white flowers followed by reddish-purple fruit clusters, attracts birds.
<i>Prunus cerasifera</i> 'Newport' Newport plum	To 7,000	FS to PS	M	15' x 10-15'	Broad oval to rounded crown. Reddish foliage throughout season. Pink to white flowers in spring. Seldom sets fruit.
<i>Salix alba</i> White willow	To 7,500	FS	H	30-40' x 20-30'	Vase shaped to rounded with yellow branches. Narrow bright green leaves turn yellow in the fall. A weeping form 'Tristis' is also available.
<i>Sorbus aucuparia</i> European mountainash	To 8,000	FS to PS	M	15-25' x 15-20'	Upright, rounded growth habit. Dark green leaves turn red-orange in fall. White flowers followed by orange-red persistent fruit.
<i>Syringa reticulata</i> Japanese tree lilac	To 7,000	FS-PS	L - M	15'-20' x 10-15'	Rounded small tree or large shrub. Deep green leaves turn yellow in fall. Fragrant, creamy white flowers appear in early summer.

<sup>1</sup> Exposure: FS= Full Sun, PS= Part Shade

<sup>2</sup> Moisture requirement: L= Low, M= Moderate, H=High

<sup>3</sup> These are general height and width estimates. At higher elevations, woody plants will be somewhat smaller due to the shorter growing season.

**Table 2. Shrubs for mountain areas.**

Scientific name Common name	Planting Elevation in feet	Exposure <sup>1</sup>	Moisture <sup>2</sup>	Mature Size <sup>3</sup> H' x W'	Comments
<i>Aronia arbutifolia</i> Red chokeberry	To 7,500	FS to PS	M - H	4-6' x 2-4'	Upright, suckering habit. Dark green foliage turns red in fall. White flowers followed by bright red fruit that attracts birds. Prefers neutral to acidic soils with higher organic content.
<i>Aronia melanocarpa</i> Black chokeberry	To 8,000	FS to PS	M - H	3-5' x 2-5'	Upright, suckering habit. Deep green glossy leaves turn purple-red in fall. White flowers followed by purple-black fruit that attracts birds. Prefers neutral to acidic soils with higher organic content.
<i>Berberis thunbergii</i> Japanese barberry	To 7,500	FS	L - M	2-5' x 2-5'	Rounded, dense habit with thorny stems. Small leaves with orange-red fall color. Small yellow flowers followed by red persistent fruit. Many varieties have purple-red foliage throughout the growing season; some of these are shorter in size.
<i>Caragana arborescens</i> Siberian peashrub	To 10,000	FS	L - M	6-10' x 4-6'	Upright growth habit with olive-green twigs. Small leaves. Pea-like yellow flowers in the spring. Good windbreak. Can be weedy.
<i>Cotoneaster lucidus</i> ( <i>C. acutifolius</i> ) Peking or Hedge cotoneaster	To 10,000	FS to PS	L	5-8' x 4-6'	Upright arching shrub. Dark glossy green leaves turn orange-red in fall. Small pink to white flowers followed by persistent black fruit that attracts birds. Tolerates poor soils.
<i>Euonymus alatus</i> Burning bush	To 7,500	FS to PS	M	4-6' x 4-6'	Flat-topped rounded shrub; branches have corky "wings." Dark green foliage turns bright red in fall. Inconspicuous flowers followed by four-lobed fruit.
<i>Forsythia x hybrida</i> Forsythia	To 7,500	FS	M	4-6' x 6-8'	Rounded, arching habit. Golden yellow flowers bloom before foliage emerges. 'Meadowlark', 'Northern Gold' and 'Northern Sun' are more cold-hardy cultivars.
<i>Juniperus horizontalis</i> Creeping juniper	7,000 - 9,000	FS	L	1-2' x 4-6'	Low, spreading habit. Evergreen foliage often blue-green turning purplish in winter. Numerous cultivars vary in height, foliage color, and hardiness.
<i>Juniperus sabina</i> Savin juniper	7,000 - 9,000	FS to PS	L - M	1-4' x 4-6'	Spreading branches grow upright from center. Evergreen foliage is green, turning somewhat brown in winter. Numerous cultivars vary in height, growth habit, and hardiness.
<i>Ligustrum vulgare</i> 'Cheyenne' Cheyenne privet	To 7,500	FS to PS	L	4-6' x 4-6'	Upright dense habit. Dark green glossy leaves. White flowers in early summer followed by glossy black fruit that is attractive to birds. Good hedge plant.
<i>Philadelphus lewisii</i> 'Cheyenne' Cheyenne mockorange	To 9,000	FS	L - M	4-6' x 4-5'	Upright, rounded shrub with reddish-brown twigs. Large, white fragrant flowers in early summer. Plant Select® 2001.
<i>Physocarpus opulifolius</i> Common ninebark	To 8,500	FS	L - M	4-6' x 4-6'	Upright arching growth habit, with bark that shreds in paper-thin layers. White flowers followed by pink to brownish fruit. Many cultivars have foliage from yellow to purple-red.
<i>Prunus tomentosa</i> Nanking cherry	To 8,500	FS	L - M	6-8' x 6-8'	Upright, spreading shrub with peeling bark. Dark green, fuzzy leaves. Pink-white, fragrant flowers followed by small, red edible fruit that attracts birds.
<i>Prunus x cistena</i> Purpleleaf sand cherry	To 8,000	FS	M	4-6' x 4-6'	Erect growth with suckering habit. Purple-red foliage throughout season. Small pink flowers seldom set fruit.
<i>Rhus typhina</i> Staghorn sumac	To 7,000	FS	L - M	8-12' x 6-8'	Suckering shrub with stout branches covered by velvet-like hairs. Bright green compound leaves turn red-purple in fall. Persistent fuzzy red fruits develop on female plants.
<i>Ribes alpinum</i> Alpine currant	To 9,000	FS to PS	L	3-4' x 3-4'	Upright to rounded growth. Insignificant yellow flowers with few fruit. Good as a low hedge.
<i>Rosa</i> spp. Roses	To 8,000- 10,000	FS	L - M	Varies with type	Harrison's rose has once-blooming, double yellow flowers. Red-leaved rose ( <i>Rosa glauca</i> ) has pink single flowers and plum colored foliage. The Explorer and Parkland series roses from Canada are also very cold hardy. Many <i>Rosa rugosa</i> selections and Alba roses are also quite hardy. <i>Rugosa</i> roses prefer neutral to acidic soil.
<i>Sambucus canadensis</i> Elderberry	To 8,000	FS	M-H	6-8' x 6-8'	Rounded shrub with suckering habit. Bright green compound leaves. Clusters of white flowers in early summer followed by blue-black berries that attract birds.

Table 2 (cont.). Shrubs for mountain areas.

Scientific name Common name	Planting Elevation in feet	Exposure <sup>1</sup>	Moisture <sup>2</sup>	Mature Size <sup>3</sup> H' x W'	Comments
<i>Sorbaria sorbifolia</i> Ash-leaf spirea or Ural false-spirea	To 8,000	FS to PS	M	4-6' x 4-6'	Stiff upright growth with suckering habit. Fern-like leaves turn yellow in fall. White plume-like flowers in mid-summer.
<i>Spiraea x vanhouttei</i> Vanhoutte spirea	To 8,000	FS to PS	L - M	4-6' x 4-6'	Graceful shrub with long, arching branches. Small white flowers cover shrub in spring. Blue-green foliage turns orange-red in fall.
<i>Symphoricarpos orbiculatus</i> Coralberry, buckbrush	To 7,500	FS to PS	L - M	3-5' x 3-5'	Oval to rounded shrub with dark green leaves that turn reddish in the fall. Tiny white to pink flowers produce persistent purple-red fruit.
<i>Syringa vulgaris</i> Common lilac	To 9,000	FS	L - M	6-8' x 4-6'	Upright, vase-shape shrub. Thick, heart-shaped leaves. Fragrant flowers in early summer. Many cultivars available with different flower colors and growth habits. Protect from wind and place in warm, south-facing microclimate for best bloom.
<i>Syringa x prestoniae</i> Preston or Canadian lilac	To 9,000	FS	L - M	6-8' x 4-6'	Oval shrub with upright branches. Dense clusters of fragrant flowers in early summer. Many cultivars available with different flower colors. Protect from wind for best bloom.
<i>Viburnum lantana</i> Wayfaringtree viburnum	To 8,000	FS to PS	L - M	6-8' x 6-8'	Rounded shrub. Leathery gray-green leaves turn purple-red in fall. White flowers followed by red fruit that turns black in late summer and attracts birds.
<i>Viburnum lentago</i> Nannyberry viburnum	To 8,000	FS to PS	L - M	8-10' x 6-8'	Upright, arching branches develop oval shape. Shiny, dark-green leaves turn red-purple in fall. White flowers produce blue-black fruit that attracts birds.
<i>Viburnum opulus</i> European cranberrybush	To 8,000	FS to PS	M	8-10' x 8-10'	Upright, arching habit. Maple-shaped leaves turn orange-red in fall. White flowers followed by persistent red fruit that attracts birds. Many cultivars available, including a sterile form called 'European snowball'. Aphid prone.
<i>Viburnum trilobum</i> American cranberrybush	To 7,500	FS to PS	L - M	6-8' x 4-6'	Upright, arching habit. Maple-like leaves turn deep red-purple in fall. White flowers followed by red fruits that attracts birds.

<sup>1</sup> Exposure: FS= Full Sun, PS= Part Shade

<sup>2</sup> Moisture requirement: L= Low, M= Moderate, H=High

<sup>3</sup> These are general height and width estimates. At higher elevations, woody plants will be somewhat smaller due to the shorter growing season.

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