

JUNIPERS THRIVE IN VARIOUS SOILS, SUIT MANY PLANTING DESIGNS

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If used correctly, cultivars of juniper (*Juniperus chinensis*, *communis*, *horizontalis*, and *sabina*) and Eastern Redcedar (*Juniperus virginiana*) can add variety and low maintenance to the landscape while being tolerant of urban conditions. Their ultimate height varies from 6 inches (native *Juniperus horizontalis*) to 40 feet (Eastern Redcedar). Junipers thrive in conditions varying from swamp-water sand (Eastern Redcedar) to well-drained rocky sites. They will grow in the shade of a swamp or full sun of foundation plantings.

Juniper thrives in soil conditions from well-drained sand to heavy, yet well-drained clay. The pH can vary from 5.0 to 7.0 with little problem. Junipers can be used in mass plantings, hedges, shelter belts, foundation plantings, and rock gardens, in fact, almost any application. They thrive in full sun while only tolerating partial shade, in fact, becoming open and leggy in shady conditions.

The insects and diseases are many, including cedar apple rust, twig blight (*Phomopsis juniperovora*), web worm, scale, mites, and bagworm (in Illinois, Indiana, and Missouri), but only a few are catastrophic. The catastrophic pests are twig blight (*Phomopsis juniperovora*), scale and mites.

There is a tremendous varietal variation as to *Phomopsis* (twig blight) resistance, not only between cultivars but also geographic locations in the landscape. This tremendous variation of susceptibility has been surveyed by many of the land grant colleges. When designing a planting, checking with your local Cooperative Extension Service for an approved list is paramount. A few of the most resistant juniper varieties, as reported by Laemmlen, Michigan State University, included *J. chinensis* 'Ames,' 'Armstrongii,' 'Fairview,' 'Hetzii,' 'Keteleeri,' 'Mountbatten,' 'Pfitzeriana,' 'Pfitzeriana Aurea,' 'Pfitzeriana Compacta,' *sargentii*, *procumbens*, and to a slight extent, *procumbens* 'Nana'; *J. horizontalis* Douglasii, 'Emerald Spreader,' and 'Wiltonii'; and *J. sabina* 'Arcadia,' 'Broadmoor,' and 'Von Ehron.' Moderate success has been achieved when spraying several times (two minimum) with Benlate and a wetting agent. Use of chemicals during a cool, wet spring, when the disease is rampant, has met with varying results.

Scale and mites can be severe problems. Many junipers that stop growing are suffering from a severe mite infestation which occurs during the heat of summer. Control is relatively easy with a miticide or ovicide when a slight yellowing or bronzing of the foliage becomes apparent, symptomatic of a heavy infestation.

The only effective way to discuss junipers is by cultivar. The over 170 cultivars available in the trade, as reported by Wyman, make this an exciting yet confused group. Further, each year additional varieties are being selected and introduced.

Therefore, one should be continually trying new cultivars to add resistance and variety in the landscape. The following discussion of cultivars is designed to assist landscape architects and grounds managers make effective decisions, reducing maintenance while improving the quality of the landscape.

Chinese Juniper (*J. chinensis*) is an exciting juniper when considering the many cultivars. They range in height from 12 inches to 15 feet, prefer growing in full sun, and display a broad range of exciting greens in landscapes.

'Ames' has a steel blue foliage, turning somewhat paler green with maturity. Initially, it was introduced as a dwarf, but we find it is wide and spreading, reaching 3 to 4 feet in height.

'Armstrongii' is a sort of Pfitzer Juniper with a softer blue-green foliage, taking on the habit of Compact Pfitzer, rarely reaching over 3½ feet in height while being quite horizontal.

'Blaauw' is a semi-upright vase-shaped shrub with a rich blue-green foliage, reaching about 4 feet in height and width, making it an excellent hedge plant; formally or informally pruned.

'Fairview' is a narrow, pyramidal, vigorous growing plant with silver berry-like cones developing during late summer and early fall. This cultivar shows resistance to twig blight and mites.

'Hetzii' is a large, upright growing shrub, reaching 15 feet in height and width at maturity. Its foliage is dense, being lightly bluish-green.

'Iowa' is reported in some areas to have slight resistance to twig blight and is a somewhat upright growing shrub, reaching 10 feet in height. It is particularly effective in formal areas where that blue-green coarse foliage can add variety.

'Keteleeri' is a light to medium green foliage which is somewhat grayish-green early in the season, becoming a light green later. The habit of growth is broadly pyramidal with a good strong central leader. This plant is extremely effective in mass plantings or as informal hedges.

'Mint Julep' is an introduction of Monrovia Nursery. Its habit is somewhat upright, spreading with arching branches while not being nearly as horizontal as Pfitzer Juniper with a brilliant light green foliage. It is a uniquely shaped vigorous addition to the informal landscape.

'Mountbatten' is a 20-foot, dense, somewhat compact, narrow pyramidal-shaped tree. The foliage is a steel blue-green, reaching 18 to 20 feet in height.

'Pfitzeriana' is probably the most widely planted of the juniper types. Its broad spreading form, which reaches 5 to 6 feet in height and 10 feet in width, gives almost a fountain-like appearance. It is effective in mass plantings or as specimen shrubs. The light green foliage and habit are characteristic.



Mint Julep, a cultivar of Chinese Juniper (*J. chinensis*), spreads brilliant light green foliage.

'Pfitzeriana Compacta' is a dwarf or compact Pfitzer with gray-green foliage. It is slower growing and well suited to foundation planting. One must mulch late plantings heavily as winter injury can be a problem when planted in September and October.

Sargentii, a low-spreader juniper, 18 to 24 inches in height, with a 6 to 8-foot spread, is quite regular, giving a formal appearance to the area. It can be effective in mass plantings or as a ground cover with exciting blue-green foliage. Sargent Juniper shows excellent resistance to twig blight.

Procumbens (Japanese Garden Juniper), now listed as *J. chinensis procumbens*, is one of the premier juniper types. It reaches 12 to 28 inches in height with a 5 to 10-foot spread. Its light green foliage is exciting, allowing it to adapt well as a ground cover or specimen plant. It is extremely effective in beds or mass plantings, being contained easily with light pruning. In Michigan, *Phomopsis* (twig blight) rarely develops, but mites can become a problem.

Procumbens 'Nana' (Dwarf Japanese Garden Juniper) is very slow growing and considerably more compact. It may be used as a ground cover in rock gardens or in open areas. In Michigan and Ohio twig blight is an extreme problem. This plant has a place in the landscape, but it is so slow growing that any slight damage can often result in a plant that decreases in stature. It should be used sparingly in Michigan, but Dirr has reported few problems in Illinois. Again, check your local Cooperative Extension Service.

Common Juniper (*J. communis*) is native to a broad area of the United States. It should be noted though that provenance is important. Plants doing extremely well in New England will not always flourish in Pennsylvania. The habit of this small tree is somewhat ascending, reaching 6 to 12 feet in height. Wyman reported Common Juniper reaching 36 feet in the wild. The plant is sprawling with a fine needle-like foliage which is gray to blue-green in the summer, taking on a somewhat yellowish cast during the fall months. The cultivars of this group are well discussed in literature, but one should visit local nurserymen or the Cooperative Extension Service to obtain information as to local adaptation.

Creeping Juniper (*J. horizontalis*) is an exciting native ground cover plant. Although there are many varieties in this group which tolerate hot, dry, sunny locations, it is exciting when used in

rock gardens, foundation plantings, or mass plantings for erosion control. Many of the cultivars are extremely susceptible to twig blight; therefore, I shall only discuss the few which are showing good or almost complete resistance.

'Douglasii' is a very horizontal, rapid growing shrub. It reaches 12 to 18 inches in height and 6 to 8 feet in width. The blue-green foliage of summer often turns somewhat purplish throughout the winter months, adding additional color to the landscape.

'Emerald Spreader' is a low growing form, rarely over 6 to 8 inches in height with a light open habit. Its brilliant mint-green foliage is a great addition to the landscape, held year round.

'Wiltoni' or 'Blue Rug' is a very horizontal form, reaching 6 to 8 inches in height with a spread of 6 to 8 feet. Once established, this plant can grow quite rapidly.

Savin Juniper (*J. sabina*) and its cultivar are an exciting addition to the landscape. They range in height from 1 to 6 feet with a 5 to 10-foot spread. The species has dark green foliage in the summer, becoming a dull green during the winter months. It does extremely well on our high pH soils.

'Arcadia' has a similar habit of growth as var. *tamariscifolia* while being more prostrate, growing one foot in height and 3½ feet in width. The foliage is predominately grass green. 'Arcadia' shows good resistance to twig blight.

'Broadmoor,' a dwarf low-spreading shrub which tends to build up from the center with age, is unique in habit and color. The color, early in the season, is a brilliant mintgreen, becoming a soft gray-green during late summer, fall, and winter. 'Broadmoor' rarely goes over 18 inches in height while being five to 10 feet across.

'Von Ehron' is a vase-shaped shrub, 6 feet by 10 feet in the landscape, while reaching 15 feet by 45 feet, according to Wyman. The foliage is a light green. 'Von Ehron' has few problems while being extremely resistant to juniper twig blight.

Eastern Redcedar (*J. virginiana*), a native with an extensive range covering most of the area east of the Mississippi, thrives in well-drained, gravelly, high-water table soils but will tolerate almost any diverse soil condition. When young, it is fairly tolerant of shade but thrives in sunny, open areas. It is an excellent specimen or mass planting tree useful in hedges, windbreaks, or native planting. It reaches 40 to 50 feet with a 10 to 20-foot spread. Resistance to twig blight should be paramount in selection of cultivars. Some of the tree forms which show good twig blight resistance include 'Burkii,' 'Cupressifolia,' 'Glauca,' and 'Hillii.'

Junipers and Eastern Redcedar are extremely tolerant of many urban conditions. They thrive in droughty-gravelly soils needing little care if the correct plant is selected. That correct plant is one that will not outgrow its area or be attacked by mites or juniper twig blight. Juniper adds another dimension to our landscape with a narrow-leaf evergreen which thrives under severe winter or summer conditions. It is highly competitive and, therefore, should not be used around every tree, but only trees which are deep rooted and effective competitors, e.g., Bur Oak. **WTT**