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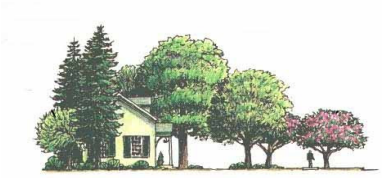
Central Coast & South Region



Center for Landscape and Urban Horticulture

Pruning Conifers

Although conifers usually require less pruning than broadleaf trees, the same basic principles apply for controlling size, creating special effects, and shaping. The crown configuration cannot be controlled as easily as with broadleaf trees. Dead, diseased, crowded, and structurally unsound branches should be removed first. Double leaders should be thinned to one unless the natural growth habit includes several main branches. Encourage branches with wide angles of attachment and smaller than the trunk from which they arise.

Pruning conifers differ from pruning broadleaf trees in several important ways. Conifers usually do not need pruning for spacing of laterals. Several branches arising at or near one level on the trunk seldom subdue the main leader of a conifer; thus, whorls of branches or those arising close together can remain, because it is unlikely they will crowd out the leader. Adequate vertical spacing between individual branches along the trunk occurs naturally in most conifers. The branches may be thinned to reduce wind resistance or to achieve aesthetic effects. For a strong, well-tapered trunk, branch whorls or laterals remain along the trunk.

Growth habit determines the severity of pruning. Conifers with a tall, straight trunk and central leaders are said to have excurrent growth. Almost all conifers are excurrent when young. Conifers are usually most attractive if the excurrent habit is preserved. Thus, the primary pruning removes or subdues any laterals that challenge the leader. Other conifers, like many mature broadleaf trees, develop a wide-spreading crown after forming a short trunk and are said to have a diffuse, random branching habit. Some conifers may develop the diffuse branching habit if they have been propagated by cuttings from side branches. The diffuse branching pattern allows more latitude in pruning.

The distribution of latent buds or growing points often limits the severity of pruning conifers (table 13.3). In some conifers, all growth derives from buds formed in the previous growing season. When the preformed buds have expanded, growth ceases. These trees may have all their lateral buds in whorls just below the terminal bud (most pines), or lateral buds may be scattered along the shoot. Conifers with whorled buds should be pruned back only to active laterals or, in current season's growth, before the needles develop fully. If pruning is done early enough, new buds will develop near the cut for the following season's growth. In conifers with latent buds scattered along the younger shoots, prune back to a latent bud. These buds will become active and develop a new growing point.

Canary Island pine (Pinus canariensis) is a notable exception. Many latent buds survive just under the bark on large branches and even the trunk. Many of these buds grow when stimulated by heavy pruning into old wood or after a fire has killed the smaller branches.

If conditions are favorable, some conifers with preformed buds, including some pines, may have several growth flushes during a growing season. Young, expanding shoots may be pruned in any or all of these flushes. If there are no visible latent buds, pruning into old wood will usually result in a stub from which no new growth will arise.

Other conifer species have buds or dormant growing points (no bud scales formed) with shoots that continue to elongate. Such species usually have abundant latent buds that produce new growth even when severely pruned into old wood. Trees of these species usually have a spiral or random branching habit. Despite their tolerance of severe pruning, these species look most attractive when thinned. Conifers with an intermediate growth habit have a large number of latent buds randomly spaced along stems or retain active laterals or short shoots for many years on older wood. Growth continues as a series of flushes.

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