

Arid Zone Times

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Thorns and Pedestrians

To protect their tender tissues and the precious reserve of moisture stored there, many desert adapted plants have evolved thorns along branches and trunks to prevent predation by thirsty animals. These thorns range from large and numerous, as in the case of saguaro and cholla cacti, to small and dispersed like Sweet Acacia or Blue Palo Verde. Many of the most popular and well adapted shade trees in the desert landscape palette have thorns including *Cercidium floridum* (Blue Palo Verde), *C. praecox* (Sonoran Palo Verde), *Acacia smallii* (Sweet Acacia), *Olneya tesota* (Ironwood), *Prosopis velutina* (Native Mesquite) and *P. glandulosa* (Honey Mesquite).

Concerns about the presence of thorns have, in some instances, limited the use of certain desert adapted tree species. While the risk of serious injury is minimal, architects and developers must carefully consider the use and placement of thorned trees. It is interesting, though, that thorns have never proven a deterrent to the landscape



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Dedicated to providing quality trees to the landscape industry, that are appropriate to the desert Southwest.

use of roses, both in tree and shrub form. As with roses, people recognize that some desert trees have thorns. For that matter, pedestrians do not typically walk into tree branches. That is not to say that accidents do not occur but it is clear that the "hazard" presented by tree thorns is generally exaggerated.

Because they are well adapted to the often harsh conditions of extreme heat and drying winds, many desert adapted species are the trees of choice for certain landscape applications. When placing trees near pedestrians (e.g. sidewalks, seating areas, playground equipment plazas and patios), landscape architects and designers must take the presence of thorns into

consideration. In some respects trees with large conspicuous thorns pose the least risk of injury because thorns are obvious and highly visible to the pedestrian. They serve as a visual warning about the tree, much the way cacti do with their displays of thorns. Small thorns are more easily overlooked by pedestrians but rarely cause more than a scratch.

The structure, form, and placement of trees along with other design considerations can significantly reduce risks associated with thorned species. As species like Native (*Prosopis velutina*) and Honey Mesquites (*P. glandulosa*) mature the thorns are gradually consumed by the radial growth of the branches so that mature branches are nearly or completely thorn free. Upright, multiple trunked specimens, when properly pruned and thinned to raise the height of branches, are pedestrian friendly and, offer the greatest wind resistance. During the growing season, any young thorned branches that grow down into foot traffic should be removed. With broad spreading canopies, most desert species can be easily planted some distance

from sidewalks, play equipment and outdoor seating areas and still offer ample shade.

In parking lot settings, making landscape cut-outs large enough to support the long term growth of trees, should create enough distance from parking cars to safely accommodate pedestrians. Again in this application, properly maintained upright, multiple trunked trees are recommended over single trunked specimens. These recommendations are applicable to both thorned and thornless trees planted in parking lots.

In situations where desert species are desired but thorns cannot be tolerated a number of species are available. These include Thornless Mesquite (*Prosopis sp.*), Thornless Cercidium Hybrid (*Cercidium sp.*), Desert Museum Palo Verde (*Cercidium sp.*), Shoestring Acacia (*Acacia stenophylla*), Coonavittra Waddle (*A. jennerae*), Mulga (*A. aneura*), Guajillo (*A. berlandieri*), Desert Willow (*Chilopsis linearis*), Desert Oak (*A. coriacea*), Leather Leaf Acacia (*A. craspedocarpa*), Palo Blanco (*A. willardiana*), Mexican Bird of Paradise (*Caesalpinia mexicana*), Thornless Honey Mesquite (*Prosopis sp*) and Texas Mountain Laurel (*Sophora secundiflora*).

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