

Eucalyptus Limb Drop-Who is to Blame?

It was just after Labor Day, while enjoying a walk through Morley Field, a portion of Balboa Park in San Diego; I came across an enormous limb lying on the ground beneath a 75' tall *Eucalyptus cladocalyx* (Sugar Gum) tree.



10" limb fall from Eucalyptus tree

Fortunately, no one was underneath the tree when this limb failed, or there could have been a catastrophe. Decades ago, when Balboa Park and Morley Field were created, Eucalyptus trees were heavily planted throughout park areas. They have since grown into towering, majestic trees, many greater than 100' tall. The trees exist individually and grouped in stands of

trees throughout the parkland area.

The use of many large growing Eucalyptus species within a park setting is not unusual. The Sugar Gum is an excellent tree for screening and creating wonderful skyline vistas. However, like any living, growing organism, age and maintenance practices take a toll on these majestic trees. Hazards accumulate with the crown, trunk and roots that left untended, increase the likelihood of a tree part or whole tree failure.

The limb that failed from this tree was approximately 10" diameter and about 30' long. The limb broke off of the main trunk about 30' above the ground. It appeared to snap off about 18" from the branch attachment from the main trunk. Certain Eucalyptus species, such as the Red River Gum, are known to unexpectedly drop limbs. In fact, certified arborists know the syndrome called sudden limb drop, unfortunately there is still no clear explanation or understanding of what causes the sudden limb drop. It seems to be more prevalent during the summer months, but it is not associated with wind or weather events.



The limb snapped off 18" from the branch attachment

Since this limb dropped from a Sugar Gum, as a certified arborist and horticulturist, I was curious about the reason for the failure because I was not familiar with sudden limb drop in this particular species.



Branch end showing decay

Examining the end of the limb on the ground, it became apparent there was a significant amount of decay in both the sapwood and heartwood of the limb. There appeared to be very little outer shell wall thickness intact.

While examining the limb, a bicyclist stopped by and mistakenly took me for a city park representative and started lecturing me about how unsafe the Eucalyptus trees in the park

were, how someone could have been killed. After explaining I was not a park employee, he calmed down but informed me he was a knowledgeable gardener and was very concerned about the safety and unworthiness of Eucalyptus species, especially in parks and public spaces.

His concerns were valid but his solutions, remove all Eucalyptus trees from Balboa Park, was not an objective, workable conclusion. Landscape architects, certified arborists, horticulturists, and tree care professionals know there are many useful Eucalyptus species that can be used in the urban landscape. Species selection, proper location and placement are extremely important factors when utilizing Eucalyptus species. In the 1970-1980's, indiscriminant and incorrect species selection resulted in large scale species located in residential settings, in small median strips, in park turf areas and adjacent to the Wild land Urban Interface.

Incorrect species selection and location may not become apparent for decades, but eventually the growth characteristics and cultural requirements of the species become a major problem that often results in lawsuits. Defects in limbs, trunks and roots growing over property lines, homes and streets become serious safety hazards that increase the risk of tree failure. As an ISA qualified tree risk assessor, I have been involved in many legal tree cases involving Eucalyptus species. Typically, it is the neighbor who calls complaining, worried about the neighbors tree growing over their home.



Incorrect use of the Red River Gum used in a residential setting



Previous pruning cuts and branch stubs become entry points for decay organisms

As trees age, they acquire defects. Eucalyptus trees that are not maintained or receive sub-standard maintenance practices acquire wounds through pruning, lawn mowing, string trimmers, over irrigation in turf areas, and soil compaction. Poor pruning cuts such as topping or heading Eucalyptus destroy the tree form and become entry points for wood rotting pathogens. The decay that caused the branch failure most likely occurred from one of several previous pruning cuts resulting in decay.

Eucalyptus are drought tolerant trees, when planted in turf areas, they receive excessive irrigation, resulting in root rot disease. Overhead turf irrigation results in shallow surface rooted conditions. Turf mowers run over the roots, causing injuries to roots that become entry points for root rotting organisms. String trimming and weed whackers damage the outer bark and cambium, weakening the vascular system and increasing the likelihood of decay.

As trees age and acquire defects, certain hazards are more readily apparent than others. Often time, determining tree hazards and the potential risk the hazard poses requires a tree professional trained in tree risk assessment. However, many tree hazards are readily visible, even to the untrained eye. The picture below shows a limb extended over a concrete pedestrian path leading to a tot lot. This limb is from the same tree that had the previous limb failure. The failed limb is visible in the lower left corner of the picture. Knowing the history of the tree, one has to wonder why city workers did not remove this extended limb over a sidewalk, it is an obvious hazard, based on the tree history, the likelihood of failure is high.



A limb extended over a pedestrian sidewalk from a tree with a previous history of failure is a red flag warning for removal

Knowing tree history is extremely important when assessing tree hazards and determining the risk posed by

the hazard. The limb that failed is from a tree that is in a group of Eucalyptus. Just a few months ago, one of the other trees had a substantial failure, resulting in complete removal. Fortunately, it occurred in the evening and no one was injured. However, one would think the city keeps maintenance records of tree failures and would react pro-actively in removing hazards located in the same or adjacent trees. In this instance, the city workers did no other remedial tree work, and now another tree adjacent to the previous failed tree dropped a limb. Once again, city workers have left a limb hanging over a pedestrian sidewalk. Is this the result of maintenance budget cuts, untrained personnel or just an act of negligence?



The same tree that dropped a limb with a dead limb left in the tree crown. Why didn't city workers remove this limb?

Above is a picture of the same tree that dropped a limb. We now know the history of this tree with over-extended limbs adjacent to a pedestrian pathway and tot lot, yet for some unknown reason, city workers ignored the limb over the sidewalk and this large dead limb in the tree crown. It is not always the fault of the Eucalyptus tree dropping a limb. There is no excuse for tree care maintenance workers ignoring an obvious dead and dangerous tree hazard condition. If not removed, this limb will eventually fail; hopefully no one will be under it when that occurs. If someone is injured or killed when the limbs fails, is it the trees fault or negligence on the part of city tree care workers? The failure would not be an act of God, because it is obvious the limb is dead and decaying, the failure is easily predictable. Perhaps it is city policy to take the gamble and hope an accident doesn't result in a lawsuit.

