

TREETISE

WINTER 2010

A Root Awakening

ROOTED IN KNOWLEDGE

VOLUME 2 | ISSUE 1

This new decade has really started off with a bang – in some places a crash and in others a crunch. The recent storms during the week of January 18 caused a significant number of “tree failures” throughout San Diego County. A “tree failure” occurs when a tree or part of a tree breaks off, falls down or uproots.

Many of these failures, where trees were completely uprooted, had the telltale signs of construction damage, circling and girdling roots, or wood decay fungi. The sad thing is, much of this could have been avoided (both the damage and the failures) had the trees been properly inspected during routine maintenance. Defects like these are commonly exploited by harsh weather, especially when heavy soil saturation and high winds occur. Other failures, however, were unpredictable and could not have been prevented even if they had been routinely examined by an arborist.



For our first TREETISE of 2010 we want to use the recent storms as an opportunity to educate the community on the importance of tree roots. Given that roots absorb water and minerals from the ground, are used by a tree to store sugars, and are responsible for anchoring the tree in the ground, we thought starting at ground level was sensible.

One of the most incredible failures we saw during these storms occurred in Encinitas in a well-known condominium association. A large Torrey Pine (*Pinus torreyana*), over 110 feet tall and with a trunk easily 36 inches in diameter, fell on top of the community clubhouse (see image). This association was once an apartment complex that had been converted into condos. During the conversion process, the seller had decided to install a slab of stamped concrete to accent the walkway to the sales office.



The walkway was installed roughly 5 feet away from the “root collar” (at the base of the tree where the roots and trunk merge) of this massive tree, which means big roots

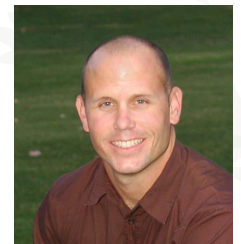
were likely cut in order create space for the molding. The failure that occurred showed significant amounts of root damage on the side of the concrete walkway, which may have been avoided had the concrete installer consulted with an arborist before making such severe cuts. Now, it's highly likely this failure will be examined in a courtroom.

n. (tree• tis) a formal and systematic exposition of the principles of a subject; more detailed than an essay.

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Message from the President

We are excited to announce that our Four Seasons Tree Care website www.FourSeasonsTC.com was awarded the *2009 Professional Communication Award* by The Tree Care Industry. Take a look to see what makes our site both informative and creative.



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We were also called out to another tree that had fallen in the Torrey Pines region of San Diego County near the Scripps Green Hospital. A 35-foot-tall Aleppo Pine (*Pinus halepensis*) fell over and landed on the tennis court of a nearby R&D Association. Fortunately, no one was injured, but something very interesting was noted about the failure (see picture). Turns out, the tree had absolutely nothing anchoring it to the ground. The roots of this tree were so severely girdled by circling “buttress roots” that they eventually broke.



“Buttress roots” are the large woody roots at the base of the tree that are responsible for a majority of the tree’s stability. When we identified the cause of failure we were shocked that this tree had not fallen years prior. What was even more frightening about this failure was there would have been no way to predict this subterranean problem without proper root exploration using advanced tools (as the root collar was buried under 2-3 inches of soil).

“Circling and girdling roots” are major problems and, unfortunately, are very common in a majority of nursery stock. This kind of root development is the result of roots outgrowing their nursery container and deflecting off of the container and back toward the trunk or around the edges of the container walls. Choosing trees that come in smaller containers and performing proper root pruning will greatly alleviate problems caused by this kind of root growth.

One of the last tree failures we investigated was an Atlas Cedar (*Cedrus atlantica*) that fell on top of a house in Bonita (see picture below). The tree, once again, had completely uprooted, but the roots didn’t show severe circling and girdling. However, the tree was planted in turf that grew up to the root collar and was regularly mowed. Upon examining the roots we noticed white markings, called mycelia fans, suggesting the tree had a very specific root rot fungus called Armillaria root rot (*Armillaria mellea*). There were probably mushrooms growing in patches around the tree that would have indicated the presence of the fungus, but since the tree was planted in turf, those mushrooms would have been regularly removed.



A wide variety of tree problems are caused by issues with the roots. People like to pay attention to the canopy, making sure it’s green and well-structured, but oftentimes disregard what’s happening at ground level. If the roots of a tree are unhealthy or poorly structured, the green canopies we love to look at won’t likely stay that way for long. By understanding the importance of roots and the factors that affect them, we can help our community by planting healthy trees with well-structured roots and hire credible arborists to monitor and maintain them.



We’re pleased to announce the addition of Christy Gramann to the Four Seasons Tree Care management team! Christy is our Director of Marketing and Business Development, and in this position brings her talents and skills to help us establish and grow our presence as a premier tree care provider for the San Diego and Temecula regions. Please contact Christy to schedule “Meet & Greet” which will introduce our company and its services to your team!

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OF TREETISE**

Awww SHOOTS!!



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